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above. Symptoms of calculus may be seen in
by immoderate & luxurious lives. When pain is ap-
seize upon one kidney & to extend round, & downwa-
to is groin & these symptoms will be foll? by freq
difficult & painful micturition, & urine being
unusually acid, high-col? & sometimes turbid.
Whole irritation appears to be due to this unhealthy
at least if symptoms vanish c. purging, warm bath
& two or three full doses of Colchicum.
AD It is ^{highly} probable that small colourless particles
of oxalate of lime - give rise to these symptoms
Ex Watson's Med
p. 570
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THE TONIC TREATMENT OF GOUT.

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ON THE

With the Author's comments

TONIC TREATMENT OF GOUT.

BY

JAMES C. DICKINSON,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS; LATE OF H.M. BENGAL
MEDICAL SERVICE; AND FORMERLY STAFF SURGEON IN THE
CRIMEAN EXPEDITIONARY ARMY.

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P R E F A C E.

THE fact that asthenic gout is much more prevalent in the present day than when the late Dr. Todd first enunciated his views on the subject, together with the circumstance of later writers not alluding either to the form itself, or the absolute necessity for a tonic plan of treatment, is the best plea the author can put forward for publishing this *brochure*.

In the present age of competition it must be admitted that the arduous duties and responsibilities appertaining to the various professions have much increased a large class of diseases dependent upon general debility and defective nutrition, among which the asthenic form of gout holds a prominent position.

I have availed myself, while writing the various chapters, of the writings of Scudamore, Cullen, Sydenham, Copland, and others, as well as of the more recent writers on gout. Especially have I availed myself of the late Dr. Todd's valuable lectures; and I hope in every instance I have acknowledged the sources from which I have derived information.

22, *Henrietta Street, Cavendish Square,*
February 1st, 1871.

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ON

THE TONIC TREATMENT OF GOUT.

CHAPTER I.

INTRODUCTION.

THE views of late writers on the treatment of gout are not applicable to the majority of cases presented to us in the present day. The value and importance of studying the late Dr. Todd's views, especially in relation to the asthenic form to prevent the development and recurrence of the malady, should be the aim of the practitioner. The tendency of the paroxysm to occur in low and depressed states of the system—in India either from malaria or anæmia, in England from excess of brain-labour or combined in some instances with a too rigidly ob-

served regimen—shows that a tonic treatment is necessary.

For a long time past I have been impressed with the fact, that positive results were rarely or ever obtained by carrying out the usual and certainly only too well-beaten track of treatment of gout, as laid down by later writers. On the contrary, I have found that the views of my revered master, the late Dr. Todd, are applicable to the majority of cases of gout presented to us in the present day. Dr. Todd says in his admirable lectures, “It does not appear to have attracted any notice that a low or depressed state of the system is favourable to the development of the gouty diathesis.” My own practice, both in India and England, fully bears out the above remarks. Further on Dr. Todd says, “An asthenic form of gout has long been recognised by practitioners. In such instances, however, the asthenic constitution had been brought on by previous repeated attacks of the disease. But the cases, however, to which I refer are those in which there is a natural or acquired feeble or even exhausted condition of body, which favours the develop-

ment and recurrence of the paroxysm of this malady.”

To prevent the development and recurrence of the malady should be the aim of the practitioner, and when it is remembered how great is the tendency of the paroxysm to occur in low and depressed states of the system, a tonic plan of treatment naturally suggests itself.

In a very large number of cases in India disease has a tendency to assume the asthenic type, due either to malaria or anæmia. In England, where the asthenic type of disease largely prevails, it is due to excess of brain-labour, combined in some instances with a too rigidly observed regimen.

The aim of the author of this work is simply to show that the majority of cases of gout depend upon debility, brought on by any cause which depresses the nervous power or impoverishes the blood.

CHAPTER II.

GENERAL REVIEW OF THE DIVISIONS OF GOUT.

General review of the divisions of gout into acute and chronic
 —Gout considered as a blood disease, but treated by most writers with lowering measures: the late Dr. Todd's views
 —The cures of attacks of gout when treated solely by colchicum, iodide of potass, &c.—Importance of studying the natural history of the disease—Poor man's gout—Rheumatic gout—Hereditary gout—Conditions favourable to the production of gout: Depressed states of the system; the asthenic state; miasma; poverty of the blood; faulty digestion; sudden changes of climate; nervous depression.

ALL writers upon gout, whether ancient or modern, have admitted that the disease is of two kinds, viz., that affecting the higher and well-to-do classes, "rich man's gout," and that affecting the poorer classes, whose existence is a precarious one, and who are exposed to vicissitudes of temperature and great privation, "poor man's gout." Each of these forms has been again sub-divided into acute and chronic; and, upon this sub-division, writers have as-

sumed that gout in the wealthier classes is of a highly inflammatory type, requiring for its cure depressing and debilitating measures and a lowering regimen. Ignoring as it were the fact that amongst the wealthier classes are to be found the brain workers, and those who suffer from depressing causes, both of body and mind, and require supporting treatment equally with the poor.

Gout, again, is regarded by most writers as a blood disease, yet rarely do we meet with recommendations for improving the condition of the vital fluid; though the pallor so commonly observable in a large number of cases evidences in the most unmistakable manner the absence of the red corpuscles of the blood, the most important element in sustaining the phenomena of nutrition. Every practitioner has daily evidence of this—in the loss of appetite, imperfect digestion and mal-assimilation of food, and which ultimately lead to heart disease and dropsy, to anæmia, leucocythæmia, and malarious diseases. Again, while almost every other disease, including inflammation and erysipelas, are treated upon the stimulating and tonic

plan so strenuously advocated and successfully practised by the disciples of the late Dr. Todd, we still find the strongest opposition to a tonic treatment for gout, although the opponents to this treatment have failed in bringing forward one valid objection to such a rational mode of combating this prevalent disease. I should wish it, however, to be understood, that while strongly advocating a tonic treatment for gout, in a great majority of cases now treated on an opposite plan, I fully admit there are varieties which require, if not lowering treatment, at least an expectant one.

Great stress is laid by most authors upon the circumstance of gout being hereditary. On the fact of gout once presenting itself it is presumed that the gouty diathesis is established, that it should make its appearance at middle life, and that we must also be prepared for its reappearance from time to time, notwithstanding the constant administration of iodide of potass, colchicum, and other alkaline and depressant remedies.

It certainly, *primâ facie*, does not speak much for the *methodus medendi* of these highly vaunted specifics, when we find, according to

their advocates' own showing, that the disease recurs again and again; such remedies, such rationale of treatment, only deserve from their strongest friends the term "merely palliative;" whilst, by the depression they induce, they predispose not only to recurring attacks but also lay the foundation of those maladies already noticed.

From what I have said it appears to me that the treatment of gout is one that deserves, at the hands of the profession, something more than mere revision; that it is capable of much improvement if we bear in mind the importance of studying the natural history of the disease, as one of the chief means of advancing our medical knowledge of it, both as regards the diagnostic and therapeutical parts. And in doing so we should never lose sight of the doctrine "that certain diseases run a certain course, and in by far the majority of cases, if the patient's strength be sufficient to enable him to withstand the morbid processes, they tend to a favourable termination." I believe, therefore, and my experience confirms that belief, that the treatment of gout has hitherto been one of

mere routine, and certainly deserves and is capable of great improvement.

“Poor man’s gout,” as described by the older writers, is now rarely seen; there is, however, a class of cases frequently met with in hospital practice among draymen, coal-whippers, and others, who work hard and live freely, in which you have an active and healthy circulation, great muscular strength, no mental anxiety or strain upon the nervous system, early and regular hours of sleep, and physical—not mental—work to go through. In these cases we may, with comparative freedom, employ depressant remedies, and these, together with a moderately low diet and proper clothing, will be all that is necessary, though the recurrence of the disease will be difficult to obviate, as the occupation of the patients will as a rule be the exciting cause.

The causes which occasion the proneness of the paroxysm to recur, are

1. A low and depressed state of the system generally.

2. An asthenic state of the system is highly favourable to that excessive accumulation of

the morbid element which gives rise to the paroxysm of gout.

3. Miasmatic diseases, when they co-exist, exercise an unfavourable reciprocal influence.

4. An impoverished condition of the blood.

5. In a very large number of cases gout *arises* from, and is dependent on, indigestion, and not the *cause* of it.

6. Change of climate will often give rise to the paroxysm, especially in old Indians.

7. In people suffering from nervous depression, the result of over anxiety, study, and great moral responsibility, we find perhaps the tendency of gout to recur, to retrocede, and to end fatally more frequently than in any other class of people, not even excepting the so-called Epicureans.

CHAPTER III.

THE HISTORY OF GOUT.

The history of gout—The opinions of the ancient writers as to the treatment of gout compared with modern writers—The accuracy with which the ancients described the symptoms—Gout as depending on the *materies morbi* existing in the blood differently explained by the older writers—Galen—Psellius—Trallianus—Ætius—Coelius Aurelianus—Paulus Ægineta—Demetrius Pepagomenon—The Arabian writers—Paracelsus—Hoffman—Forbes—Brande—Horne—Dr. Cullen—Dr. Bateman—Sydenham—Meade—Heberden—Sir C. Scudamore—Dr. Todd : his views and treatment.

FEW diseases are so essentially historical as gout. From the days of Hippocrates and Galen, every century has furnished one or more names in medical literature who have earned for themselves a reputation on account of their accurate description of either the causes, symptoms, or treatment of gout.

I propose in this chapter to give a brief outline of the history of the disease, in order to show that the opinions of the ancients as to the

treatment of gout are, in many respects, as deserving of notice as those of modern writers. Indeed, there is little difference between the views of some of the former on this subject and those of the latter. As at the present day, so in ancient times were cold applications to the part, and colchicum internally, advised by some and condemned by others. So also, as may be seen from the ‘*Tragopodagra*’ and ‘*Ocypus*’ of Lucian, numerous nostrums were lauded for the complaint, as well as a rational treatment pursued by the regular practitioner of physic; and so also, as at the present day, the habits and irregularities of the patient brought discredit on the science of the physician, and led to the too general adoption of the opinion of Ovid:

“*Tollere nodosam nescit medicina podagram.*”

The accuracy with which the symptoms of gout were described by the ancient writers is also particularly noticeable. No author, either ancient or modern, has added, from the time of Hippocrates and Galen, scarcely a single symptom calling for particular comment, until

the seventeenth century, when Sydenham wrote his celebrated description of the disease.

Gout, as depending upon the *materies morbi*, or morbid humour existing in the blood, was differently explained by the older writers. Galen of Pergamos considered that it may be phlegm, or a mixture of phlegm and bile, and that the gouty concretions arise from the crude humours. Psellius believed that it is a thick humour generated and collected by an atony of the nutritive faculty. Alexander Trallianus contended that the defluxion of humours occasioning gout is various, according to the local changes and symptoms existing in different cases ; that they are bilious, phlegmatic, melancholic, or even sanguineous ; and that these occasion pain by getting between the tendons and ligaments, and distending and irritating them. Ætius, who lived at the end of the fifth or beginning of the sixth century, maintained the disease to arise from a redundancy of humours, caused by weakness of the part affected ; considered gout hereditary and dependent upon local debility ; that it was most appropriately treated by bleeding and purging, and afterwards

by tonics. He also attributed great efficacy to the use of friction in gout, not indeed during the severity of the inflammation, but when this had to a great extent subsided. He employed salt mixed with oil as an external application.

Coelius Aurelianus assigned the remote cause of gout with great accuracy, and explained its nature in a nearly similar manner to the preceding writers.

Mr. Adams, in the learned notes to his translation of Paulus Ægineta, remarks that the theory of the humours, notwithstanding its being at present in little repute, accords better with the phenomena of the disease, and is a more successful guide to practice than any hypothesis recently advanced.

Paulus Ægineta considered gout dependent on two combined causes: weakness of the affected parts, with morbid humours, the latter fixing themselves upon some of the points already weak, and, by stretching the ligaments, producing pain. He regarded gout and rheumatic arthritic complaints as of the same nature, but differing in their seat; if the affec-

tion was located in the feet only it was called "podagra," but when extensively diffused over many joints, "arthritis." He also thought that the abnormal humours might vary in character, and when they became thick or viscid, tophi, or chalk stones were formed. Among the causes of the disease he enumerated immoderate labour, violent walking, frequent exercise on horseback, the unreasonable use of venery, cold drinks, eating unwholesome food, and drinking much wine; and he remarks that occasionally accidents, as blows or sprains, have induced the first attack, the materials of the disease having previously remained quiet in the system. Sorrow, care, watchfulness, and other passions of the mind are also looked upon by him as occasional causes of gout. A similar preface has been given to it by Sprengel.

The most interesting production on the disease that has appeared was by Demetrius Pepagomenon in the thirteenth century, and was published in Paris in 1558; he states the remote causes of gout to be long-continued indigestion, repletion with food, drinking too much wine, venereal excesses, indolence or

unaccustomed exertion, and retention of the natural secretions; the venereal excesses especially weakening the tone of nervous parts. These causes give rise to imperfect digestion, and the accumulation of excrementitious superfluities, requiring to be evacuated from the system. When these excrementitious matters are retained, morbid humours are produced and collected in the affected joints. This very ingenious writer further remarks, that when crudities, or morbid humours, are found in the system, those parts which are vigorous cast them off, but those that are weak are unable to accomplish this, and collections of such humours take place in them. The opinions of the Arabian writers differ little from those quoted above. Serapion, Avicenna, and Rhazes recommended evacuations and the hermodactylus.

Many of the writers of the sixteenth, seventeenth, and eighteenth centuries were induced by the appearance of the urine, and the concretions formed in the joints, to account for the phenomena of the disease upon chemical principles. Paracelsus first, Hoffman and others afterwards,

ascribed the local and constitutional affections to the presence of tartaric salts in the blood—an opinion very generally adopted until the middle of the last century. More recently, Forbes, Parkinson, Wollaston, Horne, Brande, and others have endeavoured to show that there is always a redundancy of uric acid in gouty persons.

The connection of the disease with plethora was very justly insisted on by Dr. Cullen; and Dr. Parry conceived that the paroxysm had a salutary influence in reducing a plethora relatively great, in restoring the balance of the circulation, and in determining the blood from internal and vital parts to the extremities.

Dr. Sutton supposed that the cause of the disorder is seated in the alimentary canal, but he attempted nothing beyond this very indefinite explanation.

Dr. Bateman, Sir Charles Scudamore, and Dr. Barlow have ascribed the disease to vascular plethora.

During the last two centuries the most important writers on gout were Sydenham, Willis, Hoffman, Musgrave, Cheyne, Boerhaave, Meade,

Van Swieten, Cadogan, Forbes, and Heberden, whose writings will be hereafter alluded to.

Dr. Cullen, Dr. Mason Good, Sir C. Scudamore, and Dr. Hamilton, adopted classifications differing somewhat from their predecessors. Cullen divided the disease into four varieties: regular, atonic, retrocedent, and misplaced gout; Dr. Mason Good into three kinds: regular, disguised or lurking, and complicated gout; Sir C. Scudamore into acute, chronic, and retrocedent; and Dr. Hamilton a still more simple separation, namely, into acute and chronic. While lastly we have the views of the late Dr. Todd, who regarded gout as essentially a blood disease, and divided it into the sthenic form, which occurs in robust constitutions and in the prime of life, and the asthenic form, which occurs in persons advanced in years who have had several attacks, and in whom the malady is deeply rooted, or where the gouty paroxysm occurs in a low state of the system, constituting the majority of cases met with at the present time, and requiring for its cure a tonic treatment.

CHAPTER IV.

THE PATHOLOGY OF GOUT.

The pathology of gout—The later writers differ as to what constitutes the true pathology of this disease—The late Dr. Todd's views—Dr. Gairdner's views—Dr. Garrod's views—Dr. Gairdner's theory not in accordance with the prevailing type of gout now existing, and the treatment proposed inapplicable—Dr. Garrod's chemical researches—Dr. Todd's remarks on the condition of the urine in asthenic gout—The author's views—The important part the absence or deficiency of the red corpuscles play in keeping up the gouty diathesis—The tendency to the formation of urate of soda, especially in asthenic gout, lessened if not destroyed by tonic treatment.

DRS. TODD, Gairdner, Watson, and others, are not agreed as to what constitutes the true pathology or essence of this disease, nor can I regard the disease as being other than a blood disease, i.e., a poison generated in the system, and circulating through it.

Dr. Todd says: "It appears to me that one must look for the matter of gout as a compound derived from a product of unhealthy action of

the stomach and duodenum, which, being absorbed into the blood, unites there with some element of the bile which has been suffered to accumulate through the defective secretion of the liver. As the same causes which induce these two states will give rise to a lithic acid diathesis, we find it usually associated with them. But the former may exist without the latter; and therefore gout may show itself without the occurrence at the same time of a preternatural quantity of lithic acid.

“An organic compound, such as I have conjectured, may exist in blood in variable quantity and for an indefinite period, contaminating the whole frame and the offspring from it, and may thus give rise to the gouty diathesis. Or this matter, ever present in the system, may be liable to periodical accumulations, which can only be got rid of by periodical paroxysms.”

This solido-humoral pathology is based, first, upon the fact that this disease is always at first connected with defective assimilation and imperfect secretion. Secondly, the hereditary nature of gout affords confirmation to this

view of its pathology. As in all diseases known to be hereditary, the blood is contaminated either primarily or secondarily, as in phthisis, diabetes, the hæmorrhagic or the syphilitic diathesis. The generative act is, in its essence, one of secretion, the embryo being the result of the combination of two secretions, the one formed by the mother, the other by the father. These secretions are composed of matter separated from the blood of each parent respectively, and it is obvious that the body which results from the union of both must partake of the properties and character of both. And thus it is that we meet with children combining in equal proportions the qualities of both parents, while in others those of the father or of the mother predominate, as if the peculiar properties of the matter derived from one parent were such as to neutralise those from the other. Dr. Gairdner does not believe in the existence of a *materies morbi*, but regards venous congestion as the first condition essential to the formation of the gouty diathesis. In speaking of this condition he says: "The great venous canals of the body, as well as the larger

arterial vessels, are endowed with a resiliency which enables them to struggle well against the flood of returning blood. The fluid is then compressed between two opposing forces, that, namely, which is derived from the heart and arterial system, urging it forward on its course, and, on the other hand, the antagonistic resistance of the great veins leading to the right auricle." Under this compression he believes the vessels give way, and a true hæmorrhage is occasioned in the part affected. If the rupture take place in a minute capillary, carrying the serous portion of the blood only, œdema is the consequence ; but if the burst vessel be one carrying red blood, a true ecchymosis is formed ; and further on says : " I believe these distended capillary vessels are the real seat and cause of the painful phenomena of gout, and that the hyperæmic condition of the viscera and loaded state of the blood-vessels is very unfavourable to secretion. The pain of the fit continues unabated till the swelling and œdema begin, in fact, till the strained and distended vessels have relieved themselves by the extravasation of their fluids. Patients even observe that the

relief of the pain is coetaneous, with the appearance of œdema and the return of moisture to the skin ; the swelling, so long as it is hard, dry and elastic, affording no relief. At the same time the solid matters of the urine begin to reappear in that secretion, and the bowels, which have hitherto required the strongest cathartics to move them, are now readily opened by the gentlest aperients ; the flow of bile, in fact, is re-established. This," he adds, "I believe is the true *ratio signorum* of a fit of the gout. Its alliance is with varix, hæmorrhage, and apoplexy. It cannot be classed with pyrexia and neurosis."

Dr. Garrod says : "Gout depends on—partly at least—a loss of power (temporary or permanent) of the uric acid excreting function of the kidneys.

"1. In true gout, urea, in the form of urate of soda, is invariably present in the blood in abnormal quantities, both prior to and at the period of the seizure, and is essential to its production ; but this acid may occasionally exist largely in the circulating fluid without the development of inflammatory symptoms, as, for

example, in cases of lead poisoning and a few other instances. Its mere presence, therefore, does not explain the occurrence of the gouty paroxysm.

“2. The investigations recently made in the morbid anatomy of gout prove incontestably that true gouty inflammation is *always* accompanied with a deposition of urate of soda in the inflamed part.

“3. The deposit is crystalline and interstitial, and when once the cartilages and ligamentous structures become infiltrated, such deposition remains for a lengthened time—perhaps during life.

“4. The deposited urate of soda may be looked upon as the cause and not the effect of the gouty inflammation.

“5. The inflammation which occurs in the gouty paroxysm tends to the destruction of the urate of soda in the blood of the inflamed part, and consequently of the system generally.

“6. The kidneys are implicated in gout, probably in its early and certainly in its chronic stages; and the renal affection, perhaps only functional at first, subsequently becomes struc-

tural; the urinary secretion is also altered in composition.

“7. The impure state of the blood, arising principally from the presence of the urate of soda, is the probable cause of the disturbance which precedes the seizure, and of many of the anomalous symptoms to which gouty subjects are liable.

“8. The causes which predispose to gout, independently of those connected with individual peculiarity, are either such as produce an increased formation of uric acid in the system, or which lead to its retention in the blood.

“9. The causes exciting a gouty fit are those which induce a less alkaline condition of the blood, or which greatly augment for the time the formation of uric acid, or such as temporarily check the eliminating power of the kidneys.

10. “In no disease but true gout is there a deposition of urate of soda in the inflamed tissues.”

Dr. Gairdner's ingenious theory will hardly explain all the phenomena of gout, while bleeding and other lowering measures, so far

from affording relief to the patient, would in the present day set up all the more alarming symptoms that would arise from an over-dose of colchicum. While in that form of gout which I believe to be the commonest in the present day—the asthenic—it would be unreasonable to suppose the existence of general congestion.

The researches of Dr. Garrod clearly show that the presence of uric acid in the blood is common to the majority of those who have been previously attacked by gout; in the table which he gives of cases in which uric acid was proved to exist in the blood, the patients appear not to belong so much to that class who have been exposed to malaria, or suffered from anæmia, and other lowering causes favourable to the development of the asthenic form of gout. On the contrary, they are of the better class, where the inroads of the disease were scarcely traceable, or the general health had been but slightly impaired.

Dr. Todd, in speaking of gout in low states of the system, says: “I have remarked a peculiarity belonging to most of the cases of this

kind that I have met with, namely, that the urine does not exhibit the abundant precipitate of the lithates which so often accompanies the gouty paroxysm. In some instances there was no precipitate at all, and in others it was very slight. And the specific gravity of the urine was rather below than above the ordinary standard, indicating that no excessive quantity of either uric or lithic acid was held in solution." And again further on, says "that the presence of an undue quantity of lithic acid in the system, even though accompanied with the formation of a free acid, is not sufficient to account for the phenomena of gout. For we meet with many instances in which these conditions are present, even for a considerable period, without giving rise to any symptom of gout, as shown in cases of indigestion, febrile cold, and in fevers. In none of these cases do symptoms of gout occur, even when the disposition and the deposit is of long duration." He quotes M. Becquerel's views in confirmation of his own.

For my own part I fully believe the views enunciated by Dr. Todd. I am of opinion,

however, that the absence or deficiency of the red corpuscles of the blood has more to do with keeping up the gouty diathesis, and contributing to favour the production of urate of soda. Consequently, I believe that the gouty poison can never be eliminated from the system unless the blood is restored to its normal condition.

The formation of urate of soda is—in asthenic gout especially—lessened, if not altogether destroyed, by tonic treatment.

Hereafter I hope to be able to show what an important part the absence or presence of the red corpuscles play in either elaborating the gouty poison or keeping off the gouty diathesis.

Tonics I therefore regard as essential in the treatment. Iron I believe to be the most important and valuable of all tonics, more particularly the lactate of iron.

CHAPTER V.

SYMPTOMS AND CAUSES OF GOUT.

Gout, modern definition of—Sir C. Scudamore's description of the paroxysm of gout—The cause of the great toe being selected for the first deposition of gouty matter—Why numerous joints are implicated in subsequent attacks—The formation, &c., of chalk stones—The structures in which urate of soda is found—Gout hereditary—Gout may be acquired—Predisposing causes of gout—Exciting causes: mental emotion especially—Metastasis: to the stomach, heart, lungs, &c. — The causes of retrocedent gout—Subdivisions of the disease unnecessary—The author's views—Sir C. Scudamore's—Sydenham's description of the paroxysm.

GOUT is essentially a blood disease—accompanied with a specific inflammation of a peculiar kind, together with the presence of uric acid in the blood and the deposition of urate of soda in the various tissues of the body, but more especially in those connected with the joints. This is the accepted modern definition, and for comparison I beg to add Sir C. Scudamore's: "A constitutional disease, producing

an external inflammation of a specific kind, the susceptibility to it often depending on hereditary bodily conformation and constitution, but in many instances wholly acquired; the age, not before puberty, frequently under twenty-five, and most commonly from twenty-five to forty years of age; is commoner to the male sex, and especially those with capacious chests and of plethoric habits." I now proceed to describe the phenomena which constitute a paroxysm of gout, or a "fit of the gout," as it is commonly called.

The attack, which may or may not have been preceded by some symptoms of dyspepsia, generally commences about two in the morning in the ball of one or other of the great toes; but sometimes it will attack other parts, as the foot, the heel, the instep, the ankle. When the joint is attacked, it is either attended with or preceded by more or less constitutional fever, and it generally happens that the amount of this fever is proportionate to that of the local disorder. The pain that accompanies the inflammation is very excruciating, and has been variously described by different writers

as “boring,” “gnawing,” “stounding,” “crushing,” “wrenching,” &c., the best description, however, is that given by Sir Thos. Watson in his Lectures on Physic. Some humorous Frenchman (he says) described it in this way: Place (said he) your joint in a vice, and screw the vice up until you can endure it no longer; that may represent rheumatism. Then give the instrument another twist, and you will obtain a notion of the gout.

So extremely sensitive are some patients to the pain, that they cannot even bear the pressure of the bedclothes on the inflamed joint, while the motion of a person walking about the room aggravates it. While the pain lasts the patient is very restless, and constantly changing from one posture to another. In the fit of gout the skin of the affected part suffers—it is red, swollen, and shining, having all the appearance of being the seat of an inflammatory process. These symptoms recur in a milder degree for a few days and nights, and then the attack passes off, the patient not unfrequently stating that he feels much better than he did prior to the attack. This was

noticed by Cullen, who says: "After the fit, when the complaint has ceased entirely, it leaves the person in very perfect health, enjoying greater ease and alacrity in the functions of both body and mind than he had for a long time experienced."

As the inflammation subsides, the cuticle desquamates, accompanied with intolerable itching, and after a time the subcutaneous veins, which generally become enlarged if the inflammation has been violent, recover their normal size.

Various premonitory symptoms, as a rule, precede an attack of gout; they are so well known, and have been so long recognised by all observers, as to give rise to that state of constitution called *the gouty diathesis*.

The gouty diathesis, as we shall hereafter show, may either be hereditary or acquired. Dyspepsia in some form or other commonly precedes an attack of gout; uneasy feelings in the stomach or duodenum; acid eructations; gastrodymia; colicky diarrhoea; costiveness; flatus; or the secretions of the bowels are of an irregular kind. Twinges are felt about the limbs

in the neighbourhood of the joints ; and Dr. Todd mentions instances of the feet being so irritable as to occasion much difficulty and pain in walking. The temper is flurried, the spirits depressed. The skin is very irritable, the patient complains of itching of the skin on the back and shoulders, as well as that of the feet and legs, and cramps in the legs are not uncommon.

Hypochondria is very common, and men of gouty habit, Dr. Todd has stated, will sometimes betray a degree of weakness of feeling and temper nearly approaching a state of hysteria.

Headache, often simulating organic disease, threatening of palsy and apoplexy, are frequent attendants on this form of constitution ; they often all clear away and disappear when a paroxysm of gout occurs. We also occasionally notice palpitations of the heart, and virulent affections of the viscera of the thorax, inducing gouty bronchitis, and cough and asthma. There are also cases on record where gouty ophthalmia primarily attacked the eye, and the urethra and bladder generally became affected prior to the

development of gout in the joints. "So much is the urethra," Sir Everard Home, in his work on Stricture, observes, "in its natural state, under the influence of gout, that it is sometimes affected by it, on the coming on of every attack, with all the symptoms of inflammation, as pain in making water and a purulent discharge; and as soon as the gout fixes itself in the foot they entirely disappear. This natural susceptibility of the urethra to be influenced by gout appears to be much increased when that canal is in a diseased state, so as to increase all its symptoms, and when they have gone off to produce a recurrence of them, and to prevent the disease to which it is liable from being completely removed."

The symptoms narrated, which characterise the gouty diathesis, may occur throughout life with no further signs of gout. But in many the first indications of a gouty constitution are quickly followed by a paroxysm and the sudden seizure of some part of the body, generally a joint, by what has been called "gouty inflammation"; and the "fit of the gout" thus manifested may recur at variable intervals.

From the description given it will be seen that the natural tendency of the paroxysm of gout is to a spontaneous resolution; and that the tendency of the disease is to reappear at variable intervals. Hippocrates, and many other of the ancient writers, have shown that the disposition of the paroxysm is to occur at the spring and autumn. An interval of one year generally takes place between the first and second attack, and six months between the second and third attack; after which the intervals become less in proportion as the gouty diathesis becomes more fully developed. In the early attacks a single joint only is affected, but, subsequently, several will be visited by the disease. At first, gout shows a decided predilection for the small joints, those of the hand and foot; but, in time, all the articulations are obnoxious to it, and as the disease advances we see several joints simultaneously attacked, as well as the tendons, ligaments, bursæ, and synovial sheaths.

Sir C. Scudamore, in his work on gout, gives a table, which has been confirmed by subsequent writers, showing that out of 198 cases

the great toe of one foot only was affected in 130 cases, and in 10 the great toe of each foot was affected: showing that the small joints are more frequently attacked than the large, and that the metatarso-phalangeal articulation is the favourite habitat of the disease.

The order in which the other joints are affected is as follows: the instep, in one or both feet; the ankle, in one or both feet; the ankle and instep; the hands and wrists; knee, and lastly, hip.

The circumstances which cause the great toe to be selected for the first deposition of gouty matter are explained as follows by a late writer. It contains, for example, in abundance, the tissues particularly prone to be affected, namely, those either of little vascularity, or nourished altogether independent of blood-vessels; it is likewise very remote from the heart, where the force of the circulation is at its minimum; and, in addition to this, the metatarso-phalangeal joint is one which is subject to pressure and injury from having to support the weight of the body, and these facts are borne out by post mortem examinations of

the metatarso-phalangeal joints of persons who never had gout: 75 per cent. were found to be more or less diseased.

Dr. Garrod gives the following probable explanation why numerous joints are implicated in advanced gout: "When the disease becomes engrafted into the system, the amount of urate of soda in the blood is augmented, and requires more surfaces upon which to deposit itself, and hence other joints, in addition to the great toe, are selected; moreover, the cartilages and ligaments of the joint so attacked after a time become completely incrustated, so much so, indeed, that the ball of the great toe is in many cases ankylosed, and converted into a solid case of urate of soda, so that no further deposit can take place in it."

The local disorder, in first attacks, leaves the joints uninjured, or with a degree of injury so slight as to be scarcely appreciable, and the constitutional fever disappears with it.

A second or third attack is not so innocent to the articular textures. There may be effusion of fluid into the synovial membrane or sheath, which may be absorbed slowly or

quickly; on the other hand, an apparent or real thickening may remain. In a greater number of cases a peculiar deposit takes place, resembling in appearance a thin layer of plaster of Paris, or chalk and water, deposited upon the surfaces of the articular cartilages. After a time these concretions thicken, looking like soft mortar; the fluid portion becomes absorbed, the concretions ultimately harden, or form *chalk-stones* of gout (tophi or tophaceous deposits). These concretions consist of urate of soda in a crystalline form. This deposit will frequently be found in the cartilages within the joints, both superficially and in its substance. Sometimes the urate of soda becomes mingled with the fibres of the tendons of the finger, beneath the skin covering the external ear, and in connection with the nasal cartilages, and, in some cases, has been seen on the inner canthus of the eye. The continued deposition of the urate of soda leads to great disfigurement of the joints, partial dislocation, imperfect motion, and not unfrequently ankylosis. These deposits occur more frequently in the hands than in any other parts of the body. Sometimes they

reach to an enormous size, stretching the skin over the earthy mass, which then ulcerates, and in some cases this secretion keeps going on. Numerous cases are on record where many balls of chalk have been removed from the hands. A case of this kind came under my notice some years since, and so crooked and misshapen had both the hands and feet become that the patient could only write with difficulty, and had been bed-ridden for the last ten years. The situations at which the elimination of this substance takes place are the various structures entering into the formation of joints, as well as in the tendons of muscles, the cartilages of the ear and nose, and, some have thought, in the arteries and valves of the heart and the sclerotic coat of the eye.

The hereditary nature of gout is so well established that no examples need be adduced here in support of so well-known a fact. It is only necessary to note that those whose family history gives no evidence of gout may acquire the disease by a total disregard of the rules of health, together with excess in the pleasures of the table. It is not very long since I

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treated a case of this kind, and the symptoms, though the first attack, were very strongly marked.

Cullen says: "Gout attacks men of robust and large bodies, men of large heads, of full and corpulent habits, and whose skins are covered with a thick *rete mucosum*, which gives a coarser surface."

The predisposing causes of gout are, plethora, the use of wine and malt liquors, sedentary and luxurious habits, irregular exercise, and hereditary disposition.

The exciting causes of gout are, strong mental emotion, excessive fatigue, seat of an old hurt (as a fall from a horse), debility after fever, a low or depressed state of the system. Numerous instances will occur to the reader of cases of gout arising from one or other of these causes. Sydenham declared the most atrocious attack of gout he ever had was after severe mental emotion; and similar instances are daily seen among our statesmen, members of Parliament, and others, whose mental powers are severely taxed.

In the preceding remarks I have given a

general outline of the ordinary symptoms of acute gout, and have shown that the effects of the disease are of an external character, and the injuries produced are functional rather than organic; and that, if life is rendered thereby somewhat irksome, it is, at least, comparatively, not in danger, supposing the *status quo* to remain unaltered. But it so happens that certain internal parts are liable to be affected by gout; and this peculiarity—metastasis, as it has been named—has led to another subdivision of the disease: retrocedent gout, irregular gout, and so on.

This tendency of the disease to fly from one part of the system to another, as, for example, from the toe to the stomach, is justly regarded as highly dangerous. The stomach is more frequently attacked than any other organ, and, from the disease being somewhat obscure, authors are divided in their views as to whether the symptoms coincide with simple spasm of the stomach, or whether they are of an inflammatory type. Dr. Todd says: "There can be little doubt that in the majority of instances this organ is thrown into a state of spasm, and

that inflammation of it rarely occurs." Others are of opinion that true retrocedent gout affecting the stomach is probably of an inflammatory nature. In the many cases which have come under my notice I have seen no symptoms which would lead me to change my opinion, viz., that it is spasm, not inflammation.

Gout by metastasis will frequently attack the circulatory organs, and, like the stomach, occasions a functional, not an organic, change of its muscular fibres. Gout may affect the brain and nervous system generally, though comparatively rarely. Cases are recorded of epilepsy and neuralgia. Of the latter I have seen two well-marked instances.

The respiratory organs are also subject to gouty attacks. Dr. Todd gives a case of severe bronchitis affecting the minutest ramifications of the tubes, which proved extremely obstinate, and did not give way until gout made its appearance in the foot, when it quickly disappeared, and the patient was discharged well.

Cases of paralysis of the spinal cord have also been observed.

Retrocedent gout depends, in many cases,

upon debility preventing the poison of the gouty matter being eliminated through the proper channels, viz., the skin, liver, alimentary canal, and kidneys. Cold is also a fruitful source of this form of gout; and probably an improved knowledge of the treatment of this disease has led to the abandonment of bleeding and cold as remedies to "cut short" the paroxysm. The latter heroic method has proved fatal in many instances; among others, the late Sir Frances Burdett.

The varieties of gout have already been referred to in the chapter on the history of gout. I cannot say I think any great advantage is derived by subdividing the disease into numberless varieties, unless such subdivision leads to a more exact and successful treatment.

Writers speak of acute and chronic gout. For my own part, I have always regarded the various symptoms as one continuous chain of events, characteristic of the natural history of the disease: similarly as I have always thought the secondary and tertiary symptoms of syphilis to be simple manifestations of the presence of a poison in the blood, giving rise to a variety

of symptoms. Later writers speak of “irregular gout,” which, in my opinion, is calculated to lead practitioners to view many diseases as gouty which are simply idiopathic. Every writer on gout has more or less displayed a sort of desire to divide and subdivide the disease, just as the writers of the present day are making useless and complicated subdivisions of skin diseases. I have never cared to divide gout into acute and chronic, as I have never been able to define where the former ends and the latter commences; and as for irregular, retrocedent, and other forms of the disease, I have simply regarded all such manifestations as the sequelæ peculiarly belonging to gout. Sir C. Scudamore says (p. 8): “It should be considered that gouty persons are not exempt from other diseases; nor are the various morbid sympathies which they suffer internally of a peculiar or specific nature. It appears to me manifest that the familiar employment of these terms, *irregular* and *anomalous*, gives an unbounded latitude to call every disease, and every morbid symptom occurring in a gouty individual, a *disguised gout*.”

Sydenham's masterly and vivid description of a fit of the gout, drawn from his own feelings, is introduced here on account of its being the most faithful picture of the disease extant.*

“ Towards the end of January or the beginning of February, suddenly and without any premonitory feelings, the disease breaks out. Its only forerunner is indigestion and crudity of the stomach, under which the patient labours some weeks before. His body feels swollen, heavy, and windy—symptoms which increase until the fit breaks out. This is preceded a few days by torpor, and a feeling of flatus along the legs and thighs. Besides this, there is a spasmodic affection, whilst the day before the fit the appetite is unnaturally hearty. The victim goes to bed and sleeps in good health. About two o'clock in the morning he is awakened by a severe pain in the great toe ; more rarely in the heel, ankle, or instep. The pain is like that of a dislocation, and yet the parts feel as if cold water were poured over them. Then follow chills and shivers, and a little fever. The pain, which

* From the translation of Sydenham's Works, by Dr. R. G. Latham.

was at first moderate, becomes more intense. With its intensity the chills and shivers increase. After a time this comes to its height, accommodating itself to the bones and ligaments of the tarsus and metatarsus. Now it is a violent stretching and tearing of the ligaments; now it is a gnawing pain, and now a pressure and tightening. So exquisite and lively meanwhile is the feeling of the part affected, that it cannot bear the weight of the bed-clothes nor the jar of a person walking in the room. The night is passed in torture, sleeplessness, turning of the part affected, and perpetual change of posture; the tossing about of the body being as incessant as the pain of the tortured joint, being worse as the fit comes on. Hence the vain efforts, by change of posture, both in the body and limb affected, to obtain an abatement of the pain. This comes only towards the morning of the next day, such time being necessary for the moderate digestion of the peccant matter. The patient has a sudden and slight respite, which he falsely attributes to the last change of position. A gentle perspiration is succeeded by sleep. He wakes freer from pain, and finds the

part recently swollen. Up to this time the only visible swelling has been that of the veins of the affected joint. Next day (perhaps for the next two or three days), if the generation of the gouty matter have been abundant, the part affected is painful, getting worse towards evening and better towards morning. A few days after the other foot swells, and suffers the same pains. The pain in the foot second attacked regulates the state of the one first attacked. The more it is violent in the one, the more perfect is the abatement of suffering and the return of strength in the other. Nevertheless, it brings on the same affliction here as it had brought on in the other foot, and that the same in intensity and duration. Sometimes, during the first days of the disease, the peccant matter is so exuberant that one foot is insufficient for its discharge. It then attacks both, and that with equal violence. Generally, however, it takes the feet in succession. After it has attacked each foot the fits become irregular, both as to the time of their accession and duration. One thing, however, is constant—the pain increases at night and remits in the morning.

Now a series of lesser fits like these constitute a true attack of gout—long or short, according to the age of the patient. To suppose that an attack two or three months in length is all one fit is erroneous. It is rather a series of minor fits. Of these the latter is milder than the former, so that the peccant matter is discharged by degrees, and recovery follows. In strong constitutions, when the previous attacks have been few, a fortnight is the length of an attack. With age and impaired habits, gout may last months. With *very* advanced age, and in constitutions *very* much broken down by previous gout, the disease will hang on till the summer is far advanced. For the first fourteen days the urine is high coloured, has a red sediment, and is loaded with gravel. Its amount is less than a third of what the patient drinks. During the same period the bowels are confined. Want of appetite, general chills towards evening, heaviness, and a troublesome feeling at the parts affected, attend the fit throughout. As the fit goes off, the foot itches intolerably, mostly between the toes; the cuticle scales off, and the feet desquamate as if venommed.

The disease being disposed of, the vigour and appetite of the patient return, and this in proportion to the violence of the last fits. In the same proportion the next fit either comes on or keeps off. When one attack has been sharp the next will take place that time next year; not earlier."

CHAPTER VI.

ASTHENIC GOUT AND ITS TREATMENT.

Asthenic gout the most prevalent form of the disease—The writers of the present day make no mention of this variety—Dr. Todd's views—The Author's views—How this form of gout is frequently induced—The class of people who are most predisposed to this form—Dr. Chambers' remarks on intellectual labour—The Author's views as to the causes which predispose to this variety of gout—The late Lord Palmerston and Earl of Derby—General symptoms—Condition of blood, urine, and skin—General principles of treatment—Food—Stimulants—Importance of a generous diet shewn.

THE most common form of gout met with in the present day is the asthenic.

It is a very remarkable circumstance in the history of this disease, that although the late Dr. Todd drew special attention to this variety, all subsequent writers on this complaint make no mention whatever of this form, as distinct from acute and chronic gout. From the time when my attention was first drawn to this variety of the disease in the wards of King's

College Hospital, I have constantly met with cases of the kind in my practice, both at home and abroad.

It would answer no practical purpose here to inquire why the asthenic variety has not been noticed by writers of the present day.

The late Dr. Todd drew special attention to this fact. He says: "It does not appear to have attracted any notice that a low or depressed state of the system is favourable to the development of the gouty diathesis. The determination of this fact in the natural history of gout is so interesting in a practical point of view, and, at the same time, so important to a correct view of its pathology, that I deem it incumbent on me to direct special attention to it; and the more so, as it seems altogether to have escaped the notice of the best writers on the disease."

In the introductory chapter of this work special attention is directed to the conditions favourable to the production of gout, viz., an asthenic state, miasma, poverty of the blood, faulty digestion, sudden change of climate, and nervous depression; while in the Appendix

cases will be found showing how the development of the gouty diathesis is influenced by the above exciting causes, as well as the importance and value of treating such cases upon a tonic plan.

The asthenic form of gout—which I believe to be the commonest variety in the present day—is met with among a large number of people in England. Nor need this statement surprise the reader, if he bear in mind the exciting causes which I have given as tending to the production of asthenic gout; while every observant practitioner must have seen many cases of asthenic gout brought on by the mode of treatment adopted, and repeated doses of colchicum or the too strict observance of an antiphlogistic regimen.

While, lastly, it can hardly have escaped the notice of any one, how frequently our leading men are prevented from attending their parliamentary duties in consequence of having passed several anxious nights in watching the progress of some important bill through its various stages, not having regular sleep, taking their meals at uncertain hours, together

with the great mental strain upon the nervous system, by which more or less degeneration in the interstitial framework of the body is produced, and ultimately an attack of this form of gout.

Such cases as I have just alluded to would hardly be, I should imagine, classed by practitioners as either acute or chronic gout. Nor can I believe they would advise a treatment, diet, and regimen of a lowering kind.

This form of gout I have constantly met with among bankers, merchants, members of the Stock Exchange, and others, who frequently, by excess of intellectual labour, exhaust their mental and bodily energy, and thus, in those predisposed to gout, bring on an attack of the variety we are now considering. Dr. Chambers writes very clearly on this point. He says : “ There cannot be a more injurious habit than that of working long at mental labour till the body is exhausted by the waste, and then engorging the heavy meal to which the false appetite gives a temptation. It cannot be digested aright, and the body, though with plenty inside it, pines away unsatisfied.”

Dr. Todd illustrates his description of asthenic gout by cases in which the disease has been brought on from an impoverished condition of the system, resulting either from a reduction in the allowance of food, or the undue employment of depressant remedies; but, as I have already pointed out, there are many other causes in addition to these which will induce asthenic gout, and the attention of the practitioner must be specially directed not only to the condition of the blood and circulatory organs, but also to the nervous system, and the functions of the whole alimentary canal.

In my opinion, it is not difficult to conceive how easily an attack of gout, such as we are now considering, may be brought on among the busy and thoughtful classes, who, taxing their strength and mental abilities to the utmost, pay no heed whatever to those slight variations of habit, such as taking an hour's sleep less each night than heretofore, or taking perhaps rather less food, lessening the allowance of wine, omitting the daily ride, or entering with more than usual animation into some great speculation, or taking a prominent part in the

debate on some great public question. The result of such cases as these is, that either a gradual, almost imperceptible, debilitated condition favourable to the asthenic form is brought on, and a paroxysm of gout follows as a matter of course, or the condition of health is so evenly balanced that any attempt to make a brilliant effort in the House is not followed by reaction, but by a nervous depressed condition which favours the almost immediate advent of a paroxysm of gout. The late Lords Derby and Palmerston were striking instances of men whose attacks were clearly traceable to want of reactionary power; while later instances of distinguished men who have succumbed to this form of gout might be adduced if necessary.

In enumerating the symptoms of this form of gout, those which are common to a fit of the gout need not be repeated here; merely those will be mentioned which, when found to be present, should guard the practitioner against the employment of depressant remedies, and suggest to him a method of treatment based upon "rational medicine."

In patients who are suffering from asthenic

gout, there is generally an anxious expression of countenance, the complexion is pale, sallow, or waxy; sometimes, however, it is a good deal flushed; dyspeptic symptoms, especially heart-burn, pain, and fulness after eating, flatulence and constipation, are present; the tongue is coated, the breath offensive, and the muscles are pale and flabby.

The condition of the urine in this form of gout is very remarkable; it will be found frequently to contain albumen, and is of low specific gravity; the absence of lithates is not unusual in a large number of cases, while the presence of the earthy phosphates is much more common than is generally supposed; indeed, many of the later writers do not allude to this diagnostic symptom.

The blood, as I have elsewhere noticed, is remarkably deficient in red corpuscles, and the inflammatory characteristics which take place when blood is drawn from a strong man suffering from acute gout, are here entirely wanting.

The skin in this kind of gout demands our especial attention, as it is most commonly found to be harsh and dry. In these cases, as in

ordinary acute gout, the paroxysm is ushered in by painful swelling of the great toe, followed by œdema and effusion into the sheaths of the muscles.

The treatment of gout in a low state of system differs so essentially from what previous writers have advocated for acute and chronic gout, that, even at the risk of being considered tedious, I shall lay down, *in extenso*, those principles of treatment which practice has shown me to be the only true and unerring ones, if we wish to accomplish the following points, viz.: first, to remove or modify the gouty diathesis; secondly, in the intervals of the paroxysms, to use every legitimate means to build up the constitution; and thirdly, to obtain the full and complete co-operation of the patient in subjecting himself to a system of discipline and self-control, so as completely to overcome the disposition to the disease. In the treatment of the gouty diathesis it has been clearly pointed out that the principal objects which demand our attention are, first, to invigorate the digestive organs and prevent the undue formation of free acid in the

stomach; secondly, to promote the elimination of the gouty matter through the various excretions; and thirdly, to obviate the tendency to the formation of (lithic) uric acid.

In order to attain the first object, a regulated system of diet, both as to quantity and quality, must be established, otherwise free acid will be formed in excess. In the form of gout we are now considering, the acidity which so frequently occurs is due either to general debility, anæmia, and want of tone, differing essentially from the so-called "gouty dyspepsia" preceding an attack of acute gout in the middle-aged and plethoric. We must also be careful to attend to the hepatic function, as from the connection between the function of the stomach and that of the liver it is obvious that digestion cannot be completely performed unless there is healthy action of both. To effect the second object, viz., the elimination of the gouty matter, we must promote the action of the liver and alimentary canal by medicines of the mercurial and purgative class; the action of the kidneys by diluents. And, lastly, the importance of exciting and promoting the healthy action of

the skin. Let us briefly consider what the secretions of the skin are. The skin of an adult man forms a surface of about 2325 to 2550 square inches, and from this surface there should be secreted every twenty-four hours from one and a half to two pints of sweat. Now this sweat holds in solution chloride of sodium and ammonium, and phosphate of lime, with other salts and organic matters. It also contains a quantity of albuminous matter, in the shape of epithelial scales, together with sebaceous matter. The sweat-glands have attracted at all times much notice; in the older writers "sudor pedum" is constantly mentioned, as they regarded the absence of sweating from the foot as one of the pathognomic signs of a fit coming on; and itching of the nose, resulting from accumulation of matter in the sebaceous glands, was also frequently noticed as a symptom accompanying the fit. Dr. Todd says: "In gout and rheumatic fever the superabundant lactic acid from the system passes most freely through the cutaneous system, and therefore in these diseases the practitioner should be careful to keep that vent open."

As long as the skin secretes freely it must aid the stomach in carrying off free acid, the liver in excreting carbon, the kidneys in separating water; and as it is the natural source for the escape of free acid, it diverts that acid from the kidneys, where it might interfere with the elimination of lithic acid in a soluble shape. For the elimination and excretion of the various matters from the skin it must be evident that they will be best promoted by frequent ablutions, by friction, and more especially by the use of the hot-air bath and Turkish bath.

In order to effect the third object in the treatment of the gouty diathesis the quantity and quality of the food must be regulated. As to the former, we must be guided partly by the patient himself and partly by his general condition, as it is obvious that great judgment and due consideration are required in each individual case. As a late writer has observed: "It is easier to have any amount of medicine swallowed, no matter how nauseous, than to insure perseverance in a course of diet." As to the quality of food best adapted for this

class—that diet which least promotes the lithic acid diathesis, and which is most easily assimilable, is the proper one. An animal diet, regulated as to quantity, will be found the best, and for this reason, that it combines the most nutriment with the least bulk. Vegetable food is not altogether inadmissible, if taken in small quantities; at the same time we should remember that where the digestive powers are faulty, a vegetable diet may give rise to many inconveniences, such as pain after eating, and flatulence, if not to development of lactic acid in the stomach and duodenum.

The treatment is essentially tonic; the bowels, if constipated, should be relieved by warm water enemata; if there is much restlessness at night an opiate should be given, or, better still, the hydrate of chloral; and tonics, more especially the lactate of iron, together with a good diet, more especially meat. All later writers are agreed upon the importance of one hearty meal per diem of flesh meat; although in building up the strength of a patient suffering from asthenic gout, small frequent meals should be insisted upon, together with a mode-

rate quantity of wine, spirits, and even beer in some cases.

It would be irrational to suppose that those people who, for years past, have been accustomed to good and generous living can be treated for such a disease as asthenic gout upon any other principles than here laid down.

Dr. Chambers says: "But it cannot be too often explained, both to patients and practitioners, that a low diet, which is a means of cure, is by no means the proper mode of preventing a *recurrence* of the disorder which has been removed by it. Those are most likely to avoid disease whose bodies are in the strongest condition of health; and those are most likely to attain the strongest condition of health who absorb and fix in their bodies the greatest amount possible of the normal constituents of the tissues."

Gouty, rheumatic, inflammatory persons, and, in fact, all those subject to complaints for which an important remedy is the diminution of the amount of the absorbed nutriment, should, in their healthy intervals, prepare themselves by

wholesome sufficient food for the application, when necessary, of a rigid regimen.

Those who treat asthenic gout cannot fail to recognise the value and importance of a "generous diet" given in accordance with the above rules.

CHAPTER VII.

CHRONIC GOUT AND ITS TREATMENT.

Has hitherto been regarded as a distinct malady rather than the natural sequelæ of the disease—The Author's views—Concretions of urate of soda thrown out—Dyspepsia—Low specific gravity of the serum of the blood—Condition of the urine—Sydenham's description—Treatment.

By most writers this form of gout is always spoken of as if it were a distinct complaint, instead of the symptoms being regarded, as some have thought, as the natural sequelæ of the disease. For my own part, I have always, as I have before stated, considered "chronic gout," so called, to be nothing more than the most palpable evidence of gouty poison still existing in the system, and that "chronic gout" is merely a series of phases, or symptoms, of one and the same disease; not separated by any clear outline, nor by any precise intermissions of time, but characterised by its effect on the constitution. In this advanced stage of the disease

we find that, in addition to the foot, other joints also are attacked, including the fingers, wrists, elbows, and knees. Concretions of urate of soda, in and around the joints especially, as well as in different parts of the body, take place, leading, in proportion to the quantity thrown out, to immobility, stiffening, deformity, and, ultimately, ankylosis of the joints. When secreted immediately beneath the skin, inflammation is gradually set up, leading to the development of chalk, stone, and gouty abscesses. The constitutional symptoms embrace most of those described in the chapter on acute gout. Various symptoms of dyspepsia show themselves. If the serum of the blood be examined, it will generally be found to be of the spec. grav. of 1026 to 1030, alkaline, and containing uric acid. The condition of the urine in "chronic gout" should always be noted; the excretion of uric acid will be found to be deficient, while there is no marked deficiency in the amount of urea excreted. Traces of albumen are also frequently met with in those who have had several attacks.

Dr. Garrod says that the functions of the

kidney for excreting urea from the blood in "chronic gout" may remain intact, at the same time that the power of eliminating uric acid may be seriously impaired. As the disease advances, the attacks become more and more frequent during the whole year, with the exception, perhaps, of a month or two in the summer. The pain, though less acute in character, is still a source of great restlessness, and can be borne with difficulty on account of its attacking several joints simultaneously. The diminished strength of the limbs, and particularly of the ligaments which embrace the joints, is made painfully evident to him; his step has lost its elasticity; his tread its firmness and resolution; his handwriting, once clear and strong, becomes tremulous and indistinct; he is subject to frequent dyspepsia, and finds it necessary to regulate his diet with great care; many articles of food previously taken with impunity must now be carefully avoided, any excess being attended with serious inconvenience. Intermissions of the pulse, palpitations, and faintness mark the part which the heart takes in the general disorder; the com-

plexion loses its clearness, enlarged subcutaneous veins creep over the face, the lips are livid, the eyes bleared, and the conjunctiva loaded with blood; chronic cough, with ropy expectoration, proceeding generally from the bronchi, torment him, and destroy his rest; slight variations of temperature affect him, and everything denotes a weakened frame and an altered being, producing great irritability of temper and sleepless nights.

Sydenham's graphic description of chronic gout I herewith add: "When either undue treatment or the prolonged delay of the disease has converted the whole body into a focus for the peccant matter, and when nature is incompetent to its elimination, its course is different. The true seat of the disease is the foot; so much so, that when it appears elsewhere its character is changed, or else the constitution is weak. Then, however, it attacks the hands, wrists, elbows, knees, and other parts, the pains being as the pains of the feet. Sometimes it distorts the fingers, then they look like a bunch of parsnips, and become stiffened and immovable. This is from the deposit of chalk-stone

concretions about the ligaments of the knuckles. The effect of these is to destroy the skin and cuticle; then you have chalk-stones like crabs' eyes exposed to view, and you may turn them out with a needle. Sometimes the morbid matter fixes on the elbows and raises a whitish tumour almost as large as an egg, which gradually grows red and inflamed. Sometimes the thigh feels as if a weight were attached to it without any notable sign; it descends, however, to the knee, and then the pain is intense. It checks all motion, nails the patient down to his bed, and will hardly allow him to change his posture a hair's breadth. Whenever, on account of the restlessness so usual in the disease, or from any urgent necessity, the patient has to be moved, the greatest caution is necessary. The least contrary movement causes pain, which is tolerable only in proportion as it is momentary. This movement is one of the great troubles in gout, since, with perfect quiet, the agony is just tolerable.

“Up to a certain time, the gout comes on towards the end of winter, lasts for two or three months, and retires regularly.

“Afterwards, however, it lasts throughout the whole year, except only the hottest months of summer. Furthermore, the longer the attack, in general, the longer is each individual fit. Instead of a day or two, they last a fortnight. Instead of the feet, they attack every joint indifferently. Lastly, on the first or second day after, the patient, besides the pain, has loss of appetite and general discomfort.”

With reference to the treatment of so-called chronic gout, we must be principally guided by the rules of treatment laid down in various parts of this work. Attention to the chylo-poetic viscera—the functions of the skin will necessarily demand attention—to the elimination of the poison by the use of diluents, carbonate of lithia, sulphur, &c. Camphor with opium was highly recommended by the late Dr. Copland, internally, together with the camphorated vapour-bath. It is supposed that, by its employment, camphor prevents any tendency to the retrocession or suppression of the paroxysm that may exist or that opium may occasion.

It will be sufficient to say here, as the subject

has been fully treated under the respective chapters, that diet, regimen, and prophylactic rules must be strictly adhered to. As the exacerbations of gout subside the diet may be improved, but great care must be taken to avoid anything of an indigestible character. Exercise, to be of any value, must be taken regularly; carriage-exercise at first, then walking, and finally horse-exercise, which is the most valuable of all.

Late hours should be shunned, and (what has lately been so much insisted upon in the case of those who suffer from mental anxiety, the result of brain-labour) the mind should be kept at rest, and country air and amusement sought for and indulged in.

Dr. Chambers' remarks on diet, previously quoted, are especially applicable to this form of the disease.

CHAPTER VIII.

REMEDIES.

Remedies—Colchicum generally employed to cut short the disease—The dangers of its habitual use: (*a*) the tendency of the disease to recur; (*b*) decrease of nervous power; (*c*) proneness to metastasis—Its properties—Specific action—Empirical employment—Views of the late Dr. Todd; Dr. Pereira; Sir C. Scudamore—The Author's rules for its administration: (*a*) in acute gout; (*b*) in chronic gout; (*c*) when contra-indicated—Empirical remedies and their effects compared with those of *eau médicinale*—Bleeding—Blisters—Salts of potash—Soda—Use of diluents—Phosphate of ammonia—Mercurial and saline purgatives—Podophyllin—Tonics—Lactate of iron—Chiretta—Friction—Warm baths—Sedatives—Opium—Hydrate of chloral—Camphor—Ass's milk—Mineral waters—Quinine—Aconite—Arnica—Sulphur.

COLCHICUM.—There is no remedy, in the whole range of so-called specifics, which has done more to render gout the *opprobrium medicinæ* than colchicum. The majority of the writers of the eighteenth century, generally, seemed to have regarded the rapid method of checking an un-

complicated attack of gout, as being the one desideratum. The consequence was, that patients were constantly in the habit of taking large doses of colchicum without medical advice ; being unaware of the fact that every time they took this medicine a larger dose became necessary to produce an equal effect ; or that the natural tendencies of the disease were aggravated, or that, as a remedy, it became a total failure, while the condition induced was a tendency for the disease to recur more frequently, together with a gradual decrease of nervous power, greater proneness to metastasis, and comparatively an early death.

Colchicum is, strictly speaking, a hydragogue cathartic ; the bile is thrown out in larger quantities, and the fæces become more coloured by its administration ; it also increases the secretions of the skin and kidneys, and is regarded as a sedative on account of its diminishing the heart's action, and in some cases producing intermission of the pulse ; while all writers have commented on the peculiar influence it appears to possess in arresting the earlier paroxysms of gout, without in any way attempting to explain

its action. As I have shown elsewhere, we are not altogether dependent upon a mere empirical remedy for the cure of gout; and I propose here, under a few separate headings, laying down such rules for the employment of colchicum as may prevent the enthusiast who has gained a temporary benefit by its employment from prescribing it in so fearless a manner as to hurry the nervous and those in advanced life to their graves.

Dr. Todd, in speaking of colchicum, says: "It should never be given in asthenic gout, nor at the commencement of a paroxysm; it should always be given, at first, in small doses, gradually increased. Colchicum, at first, should always be administered uncombined; it should never be administered so as to excite nausea, vomiting or purging; these effects are unfavourable. It is acting favourably when the urine is increased in quantity and there is a more abundant discharge of bile, as shown when the fæces, though solid, are surrounded by mucus, and the skin secretes freely. Watch the effects. The medicine is apt to accumulate. And, lastly, it is inadmissible in persons advanced in years,

who have had several attacks and in whom the malady would seem too deeply rooted to be influenced by the temporary administration of the remedy."

It will be understood that—believing implicitly in these views just quoted—I regard the administration of colchicum in gout very much in the same light as I regard bleeding.

Dr. Pereira says: "The power of colchicum to alleviate a paroxysm of gout is admitted by all, but considerable difference of opinion exists as to the extent of this power, and the propriety of employing it;" and further says that "colchicum alleviates a paroxysm, but that alleviation is palliative, not curative." And Sir C. Scudamore says it renders the disposition to the disease much stronger in the system. Furthermore, by repetition its power over gouty paroxysms becomes diminished; while later experiments show that colchicum decreases rather than increases the elimination of uric acid.

The rules which guide me in the administration of this drug in acute gout are, first, in primary attacks I seldom employ it; when I

do I never give more than one or two doses. I am also guided by the age and strength of the patient, as well as by the diathesis. When the patient is over forty-five, and with the leucophlegmatic temperament and diathesis strongly marked, its administration is, in my opinion, contra-indicated, or, to say the least, hazardous. If the depression produced by its use is great, so is the tendency to recur more frequently, and to render the disease chronic, if not asthenic, in its character. In chronic gout it is totally inadmissible in the exacerbations. If ever it is given during the treatment of chronic gout, it should be prescribed merely as an alterative, in those cases only in which the blood possesses its relatively normal quantity of red particles; whenever anæmia exists it is totally inadmissible.

In India it is a common practice among the European residents to take a variety of empirical remedies, which I have every reason to believe are nothing more than a composition of diffusible stimulants with colchicum. The results are what we might naturally expect—the establishment of chronic gout, and all the

effects described by Sir C. Scudamore as appertaining to the use of *eau médicinale*. It enfeebles the nervous system, occasions a degree of despondency and langour never before experienced, and no cases of gout are so tedious and intractable as those which had been thus empirically treated.

It matters very little what part of the plant is used, or which preparation is prescribed, they are all equally efficacious, though I give the preference to the acetic extract.

Bleeding, which was so strongly advocated in the days of Sydenham and Sir C. Scudamore, would hardly be practised in the present day by any enlightened practitioner, I should imagine, acquainted with the natural history of the disease, which evidences that a low or depressed state of the system is favourable to the development of the gouty paroxysm. In the treatment of patients of the gouty diathesis for other diseases we should be careful to avoid carrying the antiphlogistic regimen too far, for fear of exciting a fit of the gout.

Blisters, in the treatment of gout, I have frequently found very beneficial, assisting as

they do to eliminate the abnormal amount of uric acid existing in the blood, by attracting the morbid element from the articular structures. The plan I adopt is to apply *small* blisters, varying in size from a fourpenny-piece to half-a-crown, placed some short distance from the affected joint. Latterly the employment of counter-irritation, I think unfortunately, has fallen into desuetude among practitioners. The salts of potash have long been favourite remedies with English practitioners, not only because they act upon the kidneys, and so favour the elimination of uric acid, but that they also exert a greater solvent action on urate of soda than do the salts of soda. The citrate of potash may generally be prescribed in preference to the iodide, which nauseates and depresses.

The *bromide* of potass I have prescribed in many cases with advantage; particularly in those forms of gout accompanied with great nervous irritability, the sedative and hyperotic effects of this salt are singularly beneficial. I generally give from gr. x. to gr. xv. with chiretta two or three times a day. Formerly,

before employing this salt, I was in the habit of prescribing a mixture of bicarbonate and nitrate of potass., with tincture of henbane.

Salts of soda, at the present time, do not strictly belong to gout medicines, but are rather employed as remedies in the treatment of dyspepsia accompanying gout, especially inactivity of the liver.

Diluents.—All writers on gout agree as to the value and importance of this class of remedies. By their free use we not only favour the discharge of the morbid element by the bowels, but they also greatly assist its elimination by the kidneys, the action of which is in general greatly promoted by copious draughts of aqueous fluids. That the quantity given to patients will vary in different constitutions, though the quantity is much greater than is generally supposed, especially in persons liable to the generation of free acid in the stomach, must be obvious, when we consider how much water is requisite to supply the various secretions, and how much more would be needed, in persons of the lithic acid diathesis, to hold that substance in solution. One precaution, however, we must not

omit to press upon the attention of the dyspeptic, namely, not to dilute *at a meal* or *within an hour after it*, so as to distend the stomach, for the dilution may weaken the reducing power of the gastric secretion; and the distension may prevent the secretion from being poured out in sufficient quantity. Pure water is the best diluent; toast-and-water, barley-water, the various aërated waters, Vichy water, and, in some cases, I have ordered weak gin-and-water.

Phosphate of ammonia is recommended in those cases where the action of the skin requires to be excited. I have not often employed this medicine, preferring daily exercise on foot or horseback, or when these are inadmissible, the use of the warm or vapour bath.

Mercurial and Saline Purgatives.—The most useful are those which act on the liver, as blue-pill; and salines, such as Epsom salts and bitartrate of potass., together with antacids, as Sir C. Scudamore was in the habit of prescribing, the sulphate and carbonate of magnesia with the acetum colchici. It is highly

probable that in many instances equally satisfactory results would have been obtained had the colchicum been omitted. The free use of drastic purgatives, as recommended by Sutton, Sydenham, and others, cannot be too strongly deprecated. Laxatives, however, are essential in gout; the effect of the disease is to lock up the secretions and suppress the evacuations, and this must be counteracted, among other means, by laxative medicines. Citrate of potass. is justly regarded as a useful and elegant preparation; like the other salts of potass. it readily dissolves uric acid; is easily borne by the stomach, and does not, as a rule, purge. It may be given in doses of from ten grains to two drachms. Tartrate of potass. is a useful medicine, which combines both purgative and antacid properties, and has also considerable power in promoting the excretion of bile.

Podophyllin I employ in the early stages of acute gout in persons of robust habit. It is, undoubtedly, an excellent substitute for mercury; and holds, in my opinion, a place between mercury and colchicum. In persons who have been debilitated, and in those of lax

fibre or fatty heart, it is contra-indicated, as the symptoms of depression occasionally produced by its administration are often very alarming. I generally combine it with rhubarb, belladonna, and capsicum. The tonics I employ in the treatment of gout are the vegetable bitter ones, in order to restore tone to the stomach, such as gentian, rhubarb, and chiretta; the latter I more frequently prescribe, as in addition to its tonic properties it exercises a decided influence over the excretory function of the liver. I am often in the habit of prescribing the cold infusion of chiretta in combination with fluid extract of taraxacum, to be taken every morning, and have frequently found it borne well by patients who could not take simple cold water as a diluent. The lactate of iron is a very valuable remedy when we require a chalybeate tonic, especially in the asthenic form of gout, so commonly met with among tropical residents, whose blood has become deteriorated by a long residence in such places as India, China, or Japan.

For fuller information on the therapeutical employment of lactate of iron, I beg to refer

my readers to a paper I lately published in the *Lancet*. Friction has always been regarded as a very important aid in exciting the action of the skin in gout, more especially in corpulent persons. Sir W. Temple, in speaking of the benefit of friction, says, "No man need have the gout who can keep a slave;" and the following case is cited in Sir C. Scudamore's work: "Dessault cite une exemple connu à Bordeaux d'un vieillard centenaire, qui trent ans avant sa mort était garanti et guéri de la goutte, à laquelle il était fort sujet auparavant, en se faisant brosser et froter chaque jour, soir et matin, avec une main garnie d'une mitaine de laine."

Dr. Chambers says the pleasantest way of applying friction is by rubbing in powdered orris root, with Sir John Rolt's horsehair gloves, every morning, till the whole skin is pink and glowing.

The warm and vapour baths have elsewhere been alluded to as important adjuvants in assisting the stomach to carry off free acid and other impurities. Sedatives are occasionally required, especially in patients of a weak

and irritable temperament. Formerly I prescribed morphia and Battley's liq. opii sedativ.; latterly, however, I have employed the syrup of hydrate of chloral with marked benefit. Sleep is easily induced by it, and it does not, like many other soporifics, leave behind any headache or other untoward symptoms.

Camphor amongst the older physicians was considered a valuable stimulant, and might in cases of metastasis to the stomach and in a depressed state of the system be given with benefit.

Ass's milk was much extolled by Hippocrates, Celsus, and Pliny, and may, in broken-down constitutions, after repeated attacks, be given with advantage.

Lithia, which was introduced to the profession some few years since, has been prescribed in the same careless manner that colchicum formerly was, so that up to the present time we have no accurate data to guide us when we prescribe it. Its action is said to be that it renders urate of soda soluble.

The carbonate of lithia is the preparation I prefer to employ, and it should be given freely,

diluted with water, or in aërated water, or in combination with citrate of potass. or phosphate of ammonia. The citrate of lithia is prescribed when the presence of a free alkali in the stomach is not desirable. If it appear that I have dealt somewhat cursorily with lithia it is because I think too great faith is apt to be placed in the present day by practitioners in alkalies, and that new remedies often become fashionable; not that I undervalue or unappreciate any useful addition to our list of gout medicines.

Alkalies have a tendency to lower the general tone of the system and thus indirectly aggravate the mischief, as a late writer has observed; and they further tend to destroy or weaken the appetite, produce a sense of exhaustion and nervous depression, and an increase of pains and swellings.

If the success of our treatment depend “upon preventing the undue formation of uric acid, as well as getting rid of it when present in the blood,” the importance of combining alkalies with tonics cannot be too strongly insisted upon, while the deficiency of the red

corpuscles in a large number of cases of gout would suggest the administration of iron: for so long as they are deficient is gout liable to return, as the diathesis will still exist.

It was the fashion formerly for gouty patients to visit some of the well-known watering-places. I, however, generally advise patients to take a tour through some English county, believing that good bracing air, together with as much exercise as their state will allow, with a light nourishing diet, is more likely to re-establish the health than a residence at such places as either Buxton, Wiesbaden, or Marienbad. Patients who go to such places to “drink the waters” always appear to me to have an unhealthy look; whether this is due to keeping late hours and entering into the amusements of the places generally, or that the waters interfere with the assimilation of their food or debilitate them, I am not prepared to state, but that such is the fact every intelligent observer can satisfy himself.

Quinine.—The value of quinine in the treatment of gout—especially in those forms which arise from debility or malaria, inducing the

asthenic variety — has latterly not been regarded by English practitioners so much as perhaps it has been by Indian practitioners. The reason of its having been more extensively employed in India is traceable to the cause, that whenever the Indian doctor believes malaria to exist in the system, sooner or later he prescribes quinine. Medical men in the tropics have long recognised the relation that malaria bears to gout, and the impossibility of removing or modifying the gouty diathesis so long as malaria exists in the system. Dr. Todd, in his later days, was in the habit of prescribing in obstinate cases of asthenic gout small doses of quinine—a practice I have followed with very great success.

It must, however, be remembered that large doses should never be given, otherwise a series of untoward symptoms will be set up, which will do the patient very great harm, and set him against the remedy.

In the Appendix will be found a case of asthenic gout, which resisted every method of treatment that had been adopted until quinine was prescribed, and illustrates in a remarkable

manner the utility of the remedy when we suspect malaria to exist in the system.

I am generally in the habit of prescribing quinine in the form of pill—it being better borne by the stomach, especially if any irritability exists—than if given in a draught.

Aconite is a remedy practitioners will find of great value when the pain in the toe or joints during the paroxysm is more than usually exalted. I have frequently prescribed as a benumber the aconitine ointment—a single application, if carefully rubbed over the tender joint for a few minutes, will have an almost magical effect in allaying the pain—and when we remember the extreme irritability of some gouty patients, such a remedy possesses, in my opinion, great value. For many years past I have frequently prescribed this ointment with very happy results. Sixteen grains of aconitine to the ounce of hard or simple cerate is the strength I generally employ.

Arnica is a medicine deserving of greater trial than it has hitherto received, in cases where the paroxysm is accompanied with much fever. I have often prescribed ten to fifteen

minims of the tincture in a draught every four or five hours with decided advantage. While its peculiar action on the skin leads me to think it is a valuable topical application to aid in restoring the healthy condition of the skin and adjacent tissues, when the more active inflammatory symptoms have subsided.

Sulphur in small and repeated doses appears to me to be a useful medicine in those cases where the large joints have a tendency to be affected; in small and repeated doses it acts as a gentle stimulant to the secreting organs, especially to the skin and mucous membranes. In cases of gouty bronchitis its effects in many cases are striking.

CHAPTER IX.

GENERAL PRINCIPLES OF MANAGEMENT AND
PROPHYLAXIS.

Sir C. Scudamore's observations—The treatment of asthenic gout not alluded to by the later writers—The importance of early recognising the gouty diathesis—The importance of ascertaining if there is an hereditary taint—The tendency of the present age to regard gout as a dangerous rather than a fashionable complaint—The treatment during and in the interval of the paroxysms—Dr. Gregory—Sydenham's rule of management.

I PROPOSE to consider here the general principles of management, as I do not think it possible to lay down a series of specific rules for a disease of so protean a nature as gout, nor to give a series of prescriptions in a practical work of this kind; because each case has its own idiosyncrasy, which must be taken into account, and no intelligent practitioner will blindly adopt the formulæ of another. The remedies will be merely alluded to here, their particular application having been noticed elsewhere,

together with the prophylaxis, in order to give the reader as faithful a picture of the general principles of management as is likely to prove of assistance to him when treating the different varieties of gout.

Fuller details in reference to the general principles of living will be found noticed elsewhere.

Sir C. Scudamore well observes, our principles and practice should always be applied and varied in correspondence with the character of the individual constitution and habit.

So far as acute and chronic gout are concerned, most of the later writers, including Copland, Watson, and others, are agreed upon the treatment; but the treatment of asthenic gout does not receive at their hands the attention it deserves; more so, as the late Dr. Todd, as I have noticed elsewhere, drew especial attention to this variety of gout and the treatment applicable to it.

If the gouty diathesis is recognised early, and it frequently can be, then the treatment must be specially directed to avert a threatened attack. Dyspepsia, inactivity of the liver,

rheumatic and muscular pains, especially in the loins, together with the presence of lithic acid in the urine, bodily conformation, corpulency and plethora, are best treated by such remedies as will especially eliminate peccant matter, and act upon the chylopoetic viscera.

The inactive condition of the skin in asthenic gout demands the most important attention, for so long as the cutaneous outlets for the nitrogenised excreta remain open the health continues good. But if these outlets are closed the matter which in healthy subjects would have been got rid of in the form of urate of ammonia, in the debilitated arthritic individual assumes that of urate of soda. This, from its insoluble character, remains either suspended in the circulatory fluids, producing various morbid sensations, or is at once precipitated on some one or other of the joints in the form of gout.

Much as I am opposed to the general use of colchicum, it is in the early symptoms of the gouty diathesis that it may be, if ever, prescribed with advantage; at the same time regular exercise, a moderate diet, the occasional use either of the Turkish bath, or vapour bath,

together with friction, should be strictly enjoined. By these means, the capillary circulation of the skin is freely stimulated. I have for some years past made it an invariable rule in practice, when patients have come to me with dyspeptic symptoms and slight rheumatic pains, carefully to inquire into the family history, with a view to ascertain if there is an hereditary taint. Men, when they first get twinges of gout, are frequently most unwilling to admit they are of a gouty nature, and even after a first paroxysm are unwilling even then to believe it was real gout, but describe it as rheumatic gout, which they think is a milder form. I am of opinion that the tendency of the present age is to regard gout as a dangerous rather than a fashionable disease.

Having laid down the rules for our guidance to avert a threatened attack, we now come to the consideration of how to alleviate symptoms during a paroxysm. The treatment here should be varied according to the age, strength, and habit of body of the patient, with a view to relieve his sufferings as speedily as we can, without interfering with the proper elimina-

tion of the gouty matter. The tendency of the gouty paroxysm to get well in the majority of cases should always be remembered, and that it is itself a means for the elimination of the *materies morbi*. Dr. Todd observes these facts should teach us to be cautious, first, as to depressing the system too low, and so, by impairing nutrition, favouring the development or accumulation of new gouty matter; and secondly, as to ascribing to remedies that which the natural progress of the malady has effected. The treatment divides itself into constitutional and local; the former should be directed with a view to invigorate the digestive organs and promote the elimination of the gouty poison through the various emunctories, especially the skin, liver, and kidneys. A regulated system of diet is absolutely necessary, while the action of the liver and alimentary canal will be best promoted by the use of mercurials and purgatives. The action of the kidneys will be increased by the use of diluents—the salts of potass. and Vichy water. The local treatment consists in keeping off the bed-clothes from the inflamed joints by means of a cradle, and protect-

ing them from cold by wrapping them in cotton wool when necessary.

During the intervals between the paroxysms we must especially address ourselves to the elimination of the poison, by promoting the action of those emunctories through which we would direct it. Purgatives which act upon the liver and alimentary canal generally will be most appropriate. Diluents to favour the action of the kidneys, and the employment of the hot-air bath, or Turkish bath, to excite free perspiration. We must, however, be careful, in prescribing warm baths, and especially the Turkish bath, not to induce anything like depression. Local treatment is rarely required; cold applications and leeches are inadmissible; warm fomentations and stimulating lotions will occasionally be found useful after the more acute signs have subsided. The value I attach to colchicum in the treatment during the paroxysm will be found in the chapter on remedies. *Our great endeavour must ever be to build up the constitution in the intervals of the paroxysm, in such a way as to fortify it against future attacks.*

As the exacerbations of gout abate the diet may be gradually improved, care being taken to avoid indigestible dishes containing a free acid, as these are apt to cause a recurrence of the paroxysms; and we should always remember that a highly azotised food favours the production of lithic acid.

The prophylaxis of gout has been held to be equally important, both by ancient and modern writers. Demetrius Pepagomenon has justly remarked that the prophyhlaxis of gout is easily prescribed, but followed with great difficulty. Sir C. Scudamore says, "Prudence is the deity which will give safety"—

"Nullum numen abest, si sit prudentia."

And the importance of following out the prescribed prophylaxis should be remembered, as the return of the fit of gout depends more on the regimen and the mode of life of the patient, than upon the constitutional tendency and the treatment adopted.

In the chapter on general rules of living the subjects of exercise and diet are fully treated. The prevention of gout returning depends in a very great measure upon the moral courage

and determination of the patient himself; whatever plan is laid down by the medical adviser must be followed out strictly by the patient. The destruction of the gouty diathesis can only be accomplished by steady perseverance; and, above all, regularity in living. Exercise must be taken daily; the different meals at stated hours; a regular fixed hour for rest and getting up; the hours of study, few at first, gradually increased; in short, the general habits and mode of life completely altered.

The late Dr. Gregory, of Edinburgh, was a remarkable instance of the disposition of the disease to be overcome, and all the symptoms to disappear. He was descended from a decidedly gouty family; between the ages of twenty-three and thirty he had several attacks of gout, and occasionally gouty spasms in the stomach. By taking active exercise, avoiding all excesses, and using moderation in diet (although he did not abstain from animal food) during a period of twenty years, he so completely overcame the disposition to the disease, that all symptoms of it disappeared in the latter part of his life.

Sydenham, in speaking of the general rules of management, says : “ It is clear from what has been delivered, that whoever undertakes the cure of this disease must endeavour to make a thorough change of the habit of body, and restore it to its former constitution as far as age and other circumstances will admit.”

CHAPTER X.

GENERAL RULES OF LIVING.

The importance of improving digestion by enjoining prophylactic measures, as well as certain general rules of living—Value of diet-tables—Importance of mastication—The dangers of over-indulgence, and the penalty paid in occasional fits of gout—Dr. Combe's observations—Among brain-workers the importance of living well, so as always to be in a state of preparedness for sudden extraordinary demands—Alcohol, wine, and beer, their relative value—Sir W. Temple's description of diet—Finis.

As we have already seen, much may be done to cure gout by medicines suited to particular emergencies. But more may often be done by strengthening and improving digestion, especially among the overworked inhabitants of cities, by enjoining those conditions or prophylactic measures which tend to invigorate the body and which increase the power of digestion, as they often do the exhausted mental or muscular power, by improving the nutrition of the organ on which it depends.

Independently of such conditions as these, much may also be done to strengthen and improve digestion by certain general rules of living, and I have found that writing diet-tables for my patients has contributed much to this end, as the quantity of food is then duly adjusted to the powers of the stomach, and free acid is not likely to be formed in excess; while the quality is such as to avoid saccharine and other vegetable products, which may be prone to the acetous fermentation or to produce dyspeptic symptoms of any kind. All writers on indigestion, both ancient and modern, have laid down general rules or maxims, the observance of which is calculated to make digestion more easy and perfect, and to render the system in consequence less liable to a fresh attack of gout.

The following maxims will be found to embody the most important general rules of living:—

1. The quantity and quality of the food ordinarily taken by the healthy body, invariably requires modification during even the slightest derangement.

2. That the food should be well masticated. This is the first important step in the complicated process of digestion, the food, after being received into the mouth, is mixed with the saliva, and broken down till it becomes of a uniform pulpy consistence, fit for being easily swallowed and acted upon by the gastric juice on its arrival in the stomach.

If the food be tough and so escape proper trituration, or if it be swallowed in large morsels (bolting the food), through which the gastric juice cannot readily filter, it is dissolved in the stomach much more slowly, and tends to cause uneasiness of the stomach and all the other evils that result from slow and imperfect digestion—the origin of many cases of gout. Perfect mastication requires, first, That the food may be properly triturated by the teeth. To effect this, these important organs should be in a perfectly sound condition, otherwise the saliva, always prone to decomposition, very readily becomes fetid, and the food intimately mixed with this saliva, like food tainted in other ways, is apt, in persons of weak digestion, to offend the stomach. Secondly, That during the process of mastication

tion the salivary fluids become intimately mixed with the food, thus enabling it to be swallowed and to be prepared for admission into the great digestive laboratory, the stomach, by reason of the atmospheric air it contains, as well as from the ascertained fact that saliva possesses the chemical action of being able to convert starch into sugar.

3. That the stomach should never be filled to a sense of uneasy repletion. When the appetite is indulged, and a greater quantity is taken than is required to nourish the body or than the stomach can long continue to digest, that organ suffers, and superfluous matters, including the hurtful products of imperfect digestion, pass into the blood, disorder the processes of nutrition in various parts of the body by polluting the nourishing stream, and often cause permanent change of structure in the arteries. The liver and kidneys, which, being the great emunctories, serve to eliminate the superfluous matters from the system, also suffer. In a strong constitution this habitual over-indulgence of the appetite produces at first no other symptom than mere uneasiness; the

constitution is strong and vigorous, the stomach recognises the extra demand made upon it, and a sufficiency of gastric juice is secreted, for a time at least, for the digestion of this excess of food. After a time, however, this ability to digest excess of food ceases, and the penalty of the indulgence is paid in occasional fits of gout, or, more remotely still, in the various ailments that result from those permanent changes of structure which high living tends to bring on. Dr. Combe, in his excellent work, says: "In society we meet with innumerable instances of persons of every age and variety of constitution, who simply by paying reasonable attention to the quantity, times, and circumstances under which they eat, partake of every kind of food, and yet continue to enjoy a sound state of digestion."

Again, it should be remembered that among certain classes a decidedly accessional amount of flesh diet is required to retain health, and particularly among those "brain-workers" who are at any moment liable to be exposed to sudden extraordinary demands. They must be prepared for them by being habituated to

take rather more than is ordinarily required. The quality of the food must also be borne in mind, and with it the method of cooking. Roast meat is preferable to boiled, boiled to stewed.

We should also remember that those persons whose muscular systems are subjected to waste arising from hard exercise, require meat; so does the intellectual labourer require a judicious and easily assimilable diet.

The quantity of the food should clearly never be greater than the stomach can easily digest.

Finally, Sir H. Holland well observes that there should be no urgent exercise either of body or mind immediately after a full meal. In the healthy I generally advise resting half an hour, and in the debilitated from an hour to an hour and a half. The proper times for taking meals must of necessity vary with the condition and social status of men. M.P.s, legislators, university students, and members of the *haut ton* would naturally take their meals at different hours to our landed gentry and country clergymen. I prefer, therefore, to omit

laying down particular rules in the body of this chapter for the guidance of patients, but advise my brother practitioners to always draw up a separate diet-table, with rules specially adapted for each individual case. I remember well when I first suggested this plan it was regarded as an unmeaning accessory to treatment, but I am glad to find diet-tables are now more generally adopted by the profession, and are much appreciated by their patients. One advantage these diet-tables have, viz., that the right-minded practitioner, who is at the trouble of drawing them up for his patients, has the satisfaction of knowing that if errors in diet are then committed he at least is not to blame.

In a work like this, where everything appertaining to diet has a direct influence on the cure of gout, it is necessary to make some few practical remarks on those accessory articles of diet—alcohol, wine, and beer.

Of alcohol, Dr. Chambers says, by raising the nervous energy it enables a man so to use his body that during the consequent rest he absorbs or fixes enough to place himself in a better state than before. It prevents that exhaustion

or wearing out of the absorbing tissues which makes the machine less efficient for growth than before, and it allows, without damage, a certain amount of extra work, bodily or mental, to be imposed, by using indeed the substance of the body for a time, but enabling it to be replaced with interest afterwards. Whisky I have found invariably agrees with patients who have resided in Scotland and the North of England; it appears to me that it acts in precisely a similar manner on people from the north that gin does upon the Londoner and residents in the midland parts of England. That is to say, it does not heat the system, but excites a healthy, natural action both of the skin and kidneys.

With reference to the use of brandy, it may be observed that as a general rule this spirit is more in vogue among the higher classes; and there is a prevalent opinion, and a correct one, that at the period of middle life and upwards, where dyspepsia is occasionally present, or the gouty diathesis has established itself, brandy may be taken, if not with advantage, certainly with little harm. I always, when

prescribing the diet to be observed, make it a rule to ascertain exactly the previous habits and present occupation of my patient; for it would be absurd to suppose, on the one hand, that alcoholism would be produced by taking such a quantity as the system has been accustomed to, or, on the other, that the recurrence of gout would be prevented by knocking off all stimulants at once.

Wines which favour the development of uric acid, such as port, sherry, and Madeira, should be avoided. The white and red Rhenish wines, Burgundy, and some others, may be taken with advantage. Dr. Böcker has shown that the peculiar effect of Rhenish wines is to cause a striking diminution in the quantity of earthy phosphate in the urine; and Dr. Chambers, in commenting on the value of wine, says: "When we consider the important tissues from whence these phosphates principally come, no less than the bones and the brain, and what an overpowering influence their removal or destruction must have, too great value cannot be attached to an agent which possesses the property of modifying them. It must, indeed, be a two-

edged sword in the hands of the employer, capable of doing infinite good and harm."

The practitioner, bearing in mind the important part wine plays in the treatment of gout, will be careful in the habituated and aged how he reduces the daily accustomed quantity.

Beer.—The different kinds of beer contain in solution those principles which are most favourable to the production and the continuance of the gouty diathesis. Ale and porter, as containing the greatest quantity of these substances, are the most unwholesome, the Indian pale ale and table beer are the least objectionable, although in the majority of cases their use would be better discarded by the patient of gouty diathesis.

Dr. Todd was of opinion that that diet least promotes the lithic acid diathesis which is most easily assimilable, and advised small quantities of animal food, together with smaller quantities of vegetable food, taking care to avoid those saccharine and other vegetable products which are prone to the acetous fermentation, and may, therefore, favour the development of lactic acid in the stomach and

duodenum. But to obtain the same amount of nutrient material, the ingestion of a much larger quantity of vegetable than of animal food is necessary ; and in the latter there is much less complication of indigestible matter than in the former. Hence there seems good reason for adopting the opinion that an animal diet *regulated* as to *quantity* is that most likely to conduce to the establishment of a healthy digestion.

Sir W. Temple's description of the diet proper for a gouty patient cannot be too often quoted : "Simple diet, limited by every man's experience to his own easy digestion, and thereby proportioning, as near as well can be, the daily repairs to the daily decays of his wasting system."

APPENDIX OF CASES

ILLUSTRATIVE OF THE TONIC TREATMENT OF
GOUT, WITH ESPECIAL REFERENCE TO ITS
ASTHENIC FORM.

Case of Gout, occurring in advanced life, in which sulphur, together with a nutritious diet, was prescribed with great benefit.

A gentleman æt. 75, a retired army surgeon, who had for many years resided in Lincolnshire, had for some time past suffered severely from gout; chalky depositions had taken place in several joints; his legs were œdematous; his nights restless; his bowels generally costive; the evacuations were sometimes yeasty and frothy. Copious discharges of limpid urine; the tongue was coated, pulse weak and irritable; his appetite was inordinate, with a great desire for all the luxuries of the table. His habits through life had not been very irregular, yet he had lived freely and well.

His constitution appearing to give way under late repeated attacks of gout, I was requested to see him. I placed him upon the plan I always commence with, viz., regulating the bowels and dieting him. Occasionally I prescribed alteratives and purgatives, latterly small doses of sulphur. Under this treatment he gradually improved, more so than in any similar case I had had under my care. For although there could be little expectation of removing his disease at so protracted a period of life, yet his whole system was renovated; and not only were his sufferings much mitigated, but his general health improved, and the evening of his life was divested of many of the distressing effects of hypochondriasis and indigestion.

Case of Asthenic Gout brought on by anæmia, and the paroxysm lasting longer than usual by the patient being reduced too low—a moderately stimulating plan of treatment adopted—recovery complete.

Mrs. H——, æt. 50, married, not feeling in good health, went on a visit to friends at Dover. While there, was seized with gout in her right toe. Warm fomentations and a low diet were prescribed, together with alkalies and colchicum. Day by day she stated she felt getting worse; the whole foot

and ankle became inflamed and oedematous. She was excessively weak, lost her appetite, and could not sleep at night. She therefore determined to come up to London to consult me. Her condition was as follows:—General debility, together with great anæmia; lips and gums pale and bloodless, and the complexion of a sandy colour; the whole foot was much swollen, the right big toe red and inflamed, appetite bad, no sleep at night, water high-coloured, and depositing, when cool, a pink sediment; tongue pale, flabby, and retaining the marks of the teeth on its edges.

Looking upon this case as one of gout dependent upon anæmia and requiring tonic treatment, I at once prescribed a light nutritious diet, and two or three ounces of brandy daily. The syrup of hydrate of chloral at bed-time, and a pill of colocynth, blue pill, and henbane, at night occasionally; and cotton wool to the affected parts. Ten days after, the foot had recovered its normal size; the patient could walk across the room without a stick. She did not require the continuance of the hypnotic. I then ordered her a teaspoonful of syrup of lactate of iron, in water, three times a day, and advised her to take a glass of new milk every morning and meat for her dinner. I saw her a short time after, when she informed me she felt perfectly

well; and her ruddy, healthy appearance fully bore out her statement.

It may be mentioned that in this case the patient had always been accustomed to beer, and was allowed a pint of beer daily, in addition to the brandy, after she had been under treatment a fortnight.

William Keeble, æt. 60, a footman, admitted into King's College Hospital on Thursday, Feb. 21st, on account of a strangulated hernia. He inherits gout from his father, and has had several attacks during the last ten years. He had a very slight attack about four days before his admission. Before the hernia could be reduced he had purgative enemata, and was placed in a warm bath, in which he remained more than two hours. He took one grain and a half of tartar emetic, and was bled from the arm to the amount of thirty ounces. After the reduction of the hernia, he took some castor oil and was ordered a milk diet. On the 24th he was ordered middle diet. In the evening of the 25th he began to feel severe pain in the left foot, and in the course of the night the great toe and dorsum of the left foot became much swollen, red, hot, and very painful.

On the 26th he was ordered to continue the meat diet, with one pint of porter per diem, and to take a mixture with sulphate and carbonate of magnesia twice a day.

I particularly requested that colchicum should be avoided in this case, not doubting that a moderately stimulating plan of treatment would speedily relieve the paroxysms ; and the sequel of the case justified my expectations.

In the evening the pain was much less severe. To-day, Tuesday, Feb. 28th, there is slight redness and swelling, with some tenderness of the foot. He says this attack has subsided more rapidly than any previous one. On former occasions he has always kept himself on low diet, abstained from the use of stimulating drinks, and taken *colchicum*. *He has more than once* had an attack of gout after *having been bled from the arm*, and he anticipated such a result on the present occasion.*

* This case I have quoted *in extenso* from Dr. Todd's admirable Lectures on Gout and Rheumatism. I might have cited many cases of a similar kind from my own practice, but consider it fully illustrates how the gouty paroxysm occurs in a low state of system.

Case of Gout brought on by excessive mental labour and the total non-observance or neglect of the general rules of living—recovery.

J. M., a member of the Stock Exchange, who had had two previous attacks of gout, sent for me in consequence of being seized with a fit of gout. On my arrival I found him suffering from all the symptoms of gout. There was constitutional fever; the great toe, ankle, and dorsum of right foot were all red, swollen, and tender, and the subcutaneous veins generally were enlarged. I could not, however, discover any deposit of urate of soda in the helix of either ear, though I carefully looked for this diagnostic symptom, neither was there abundant precipitate of lithates, and the urine was of low specific gravity. This was his third attack, the interval between the previous attack and this being just six weeks. For some time past it would appear he had observed strict rules both as to diet and regimen. About a month ago, however, being engaged in some heavy speculations which gave him great anxiety, he began to take his meals irregularly, gave up riding into town, and, in short, neglected himself. Some days he dined in the City at uncertain hours, on other days getting home late, and then dining. Soon after a series of dyspeptic symptoms showed them-

selves, and were soon followed by the present attack. The disease was hereditary on the father's side. Warm water injections, together with an alterative draught, were prescribed, and the foot to be wrapped in cotton wool; a plain nourishing diet was ordered, a little brandy-and-water if necessary, and a sedative at night if there was much restlessness. He gradually improved, and all the gouty symptoms disappeared. I then prescribed a bitter tonic, and subsequently the lactate of iron, with a view to build up the system and fortify it against future attacks.

The history of this case is typical of a very large number of cases seen in the present day.

Case of Gout occurring in a low state of the system, the result of too strict an observance of the antiphlogistic regimen—recovery under the tonic treatment.

J. W., a professor at one of the universities, in whose family there were traces of gout, and who himself had had a previous attack, applied to me with all the characteristic symptoms of an acute attack of the disease. The whole of the right foot and ankle was involved, and also the left great toe; he stated that when he was first attacked he was treated with large doses of colchicum wine, and after he was cured he continued taking the

medicines in alterative doses, together with a spare diet, and avoided all stimulating drinks. Up to the time of his present attack an additional amount of mental labour had been thrown upon him in consequence of the mathematical examinations obliging him to sit up till one or two in the morning to examine the papers.

Not wishing to resort to wine or alcohol in any form, he was in the habit of taking strong coffee. At first he thought this benefited him. Its stimulating effects, however, soon ceased; he gradually got weaker, and he was seized with the present attack. An alterative course of medicine, with a view to establish a healthy action of the skin, liver, and kidneys, injections of warm water, slight stimulating and warm applications to the affected parts, together with a subsequent course of tonics, restored him to good health. On account of the great moral courage and determination of character of this patient, I believe that, under the diet and regimen advised, he is never likely to be again attacked with gout.

Case of severe spasmodic stricture preceding a paroxysm of Gout.

K. H., a retired colonel, æt. 64, sent for me very hurriedly the other evening under the follow-

ing circumstances:—He was suffering great pain over the region of the bladder, and was passing his urine *guttatim*; any attempt to pass a catheter, which he had heretofore been accustomed to do, was useless; violent spasm and rigors were at once set up, and the catheter was firmly grasped about four inches down the urethra. There was much nervous constitutional disturbance. I at once ordered him a warm hip-bath, and gave him a dose of castor-oil and henbane. After this the symptoms somewhat abated, and he was able to pass a small quantity of urine loaded with lithates. I saw him again in the evening, but there was not much further improvement. On calling the next morning I found all the inflammatory and spasmodic irritation of the urethra had entirely subsided, and that these symptoms had been replaced by a fit of the gout.

Since this case came under my notice a friend informed me the other day that he had been telegraphed for to a similar case at the Isle of Wight; but that soon after having done so another telegram was received to say that the alarming symptoms of stricture had subsided, and had been superseded by a paroxysm of gout.

The plan of treatment pursued in this case was first to cure the paroxysm by means of eliminative

medicines and the vapour-bath. Subsequently I advised him to adopt a regular system of living, especially to keep the functions of the skin and liver in healthy action by means of the hot or vapour-bath, and horse exercise. I have not heard from him for some months, and believe he continues well.

Case of Asthenic Gout brought on by malaria—recovery by use of tonics and change of air, together with considerable modification of the gouty diathesis.

W. K., æt. 55, an officer in the Indian army, applied to me under the following circumstances: He stated that up to the age of forty he had always enjoyed good health, took a great deal of exercise, and was passionately fond of field sports. His family history showed that gout existed on both sides. He stated that when at Meerut, after having been out in November several days “snipe shooting,” he felt unwell, but imagined at the time it was slight fever. He lost his appetite, slept badly, great restlessness, and there was a general feeling of *malaise*. A few days after he felt “flying pains” in different parts of his body, particularly in the pectoral muscles, and so marked were the pains in this region that at first both himself and his bearer thought it “wind

stroke." These pains subsided, however, and the disease concentrated itself in the great toe of the right foot, with all the characteristic symptoms of a fit of the gout. Under treatment he recovered from this his first attack, and subsequently had at various intervals other attacks; after the Mutiny he "went home," but did not stay the whole of his furlough out, owing to being subject to more frequent attacks of gout than he had been hitherto liable. Both himself and his medical advisers believed his liability to a recurrence of the disease was attributable to his residing in North Wales, great cold being, they considered, unsuitable to an old Indian who suffered from gout. He returned to India, and for nearly two years enjoyed uninterrupted good health. He was then removed to a notoriously malarious district, where fever and spleen endemically prevailed. At first, his health being good, he resisted the daily insidious attacks of the malarial poison. Latterly, however, he grew pale, easily fatigued, and he had disinclination for field sports. These symptoms were soon followed by a fit of gout. He got well under the remedies prescribed. After three months he was again seized, recovered, got ill again, and was sent to Calcutta. When he came under my care his condition was as follows: countenance pale

and worn, great depression of spirits, heart's action weak.

The right toe, and parts adjacent, were inflamed and thickened, and there was much effusion. The left toe was affected, and the right ankle-joint was also implicated. His complexion was pale; lips livid; tongue white, flabby, and retaining on its sides the impressions of the teeth, and the pulse small and weak. He stated that he had been living much lower than he was accustomed to, and had given up all stimulants. The liver was slightly enlarged, and there was some tumefaction of the spleen. The urine was alkaline, and full of phosphates, and the bowels somewhat constipated, and, in addition, there was a good deal of nervous debility. He was ordered an opiate at bedtime, and the lactate of iron three times a day; a light, nourishing diet, together with half an ounce of brandy three times a day in soda-water; the affected joints merely to be kept warm. Three days after he was much better; the joints were less painful, he slept well, and his appetite had improved. The next time I saw him, a few days after, he had much improved—was able to eat a mutton chop, and expressed a wish for beer. A pint bottle daily was ordered in addition to his brandy; to continue the iron, and to take carriage

exercise. Day by day he gradually improved, his strength increased, his complexion became cheerful and ruddy, and, after being six weeks under my care, he went to the Sand-heads for change of air, and on his return at once went back to duty.

Two years afterwards I met him, and he told me he had no return of the gout.

Note.—I advised this officer to apply for a hill station, to avoid the effects of miasma. As I have mentioned elsewhere, when the gouty diathesis is exposed to miasmatic influences they produce most unfavourable effects, and the tendency of the gouty paroxysm to recur is much intensified. By removing to an invigorating climate and pure atmosphere we generally get rid of the diathesis, or so far modify it as to diminish the frequency of the recurrence of the fits.

Case of Asthenic Gout occurring in a depressed state of the system, and exciting a fit of Gout, illustrating the value of tonics and good diet in the intervals of the paroxysms, by building up the strength, and rendering the constitution thereby less liable to a return of the disease.

I was sent for a short time since to see a country gentlemen, æt. 50, suffering from all the symptoms of a sharp attack of gout. Under the treatment advised for the paroxysm, i. e., moderate

purgation, the employment of diuretics, and the vapour bath especially, together with keeping the affected part warm, he recovered in about a fortnight; the great pain in the affected joints was much relieved by the application of aconite ointment—a remedy of great value in many cases.

The attack left him, however, in very poor condition—so much so that it was easy to prognosticate a speedy recurrence of the paroxysm, unless some systematic plan of treatment was initiated with a view to restore his general debility and impaired nutritional powers. He was lean, emaciated, and pale, with a weak, thready pulse, and great debility. On inquiry, I learnt that formerly he had been a “free liver,” and in the habit of hunting and shooting regularly; latterly he had, under the advice of a friend, given up wine, and subjected himself to a simple vegetable diet. So mischievous a proceeding as this clearly pointed out the cause of the recurring paroxysms, and the *methodus medendi*. I pointed out how absolutely necessary it was to take a light, nourishing diet, *especially animal food*, together with two or three glasses of wine daily; at the same time I ordered him small doses of quinine, and subsequently lactate of iron. Under this tonic treatment he rapidly improved. It is now six months since I

saw this patient, and have reason to believe he has had no attack of gout since.

Case of Asthenic Gout brought on by the continued use of colchicum and excessive mental labour—complete recovery, together with great modification of the gouty diathesis.

A member of the Stock Exchange, æt. 50, who was compelled to lead a very anxious and thoughtful life, had suffered at different times from gout. The last attack was about three years ago. There was gout on his mother's side. Urged by the incessant demands of business, he had invariably met the assault of the disease with colchicum, laid up for a few days only, and then resumed his business. Latterly the colchicum failed to completely remove the attack. On visiting him he gave me the idea of being a strong, well-built man, but decidedly suffering from plethora, as evident by the protuberant stomach and somewhat flushed face, while at the same time the action of the heart was weak, the pulse slightly intermittent, together with a certain amount of nervous depression. From the symptoms above narrated, it was quite clear that here was a case of asthenic gout, brought on partly by excess of mental labour, and principally by

the reckless use of colchicum, and the diathesis kept up by entirely abrogating the proper treatment and diet so necessary to observe in the intervals of the paroxysms. It was obvious that the treatment here must especially address itself in the first instance to the elimination of the gouty poison, through the kidneys, by means of diluents, as well as by exciting the freest possible action of the skin by vapour baths and friction. As soon as the symptoms of the paroxysm had subsided—being a man of great sense and firmness of character, and who appreciated the value of health—I advised him for a time to keep altogether away from business; to take tonics to restore his nervous and circulatory systems; to be regular in his habits, and to take his meals at regular intervals. I did not confine him to any particular diet, provided it was nourishing, and easily digested. In about two months afterwards he called upon me, on his return to town; his general appearance indicated rude health—the muscles were firm, the complexion bright and clear, his appetite good, the prominence of the abdomen had considerably subsided, he could walk and ride with ease, and said “he had never felt better in his life.”

Case of Asthenic Gout, brought on partly by the immoderate employment of colchicum and partly by malaria—complete recovery twelve months afterwards by the use of tonics and a generous diet.

A colonel in the Indian army, æt. 60, whose father had suffered from gout, had had many attacks of the disease during the last twenty years; of late the attacks had been painfully frequent, and the last twelve months were a period of the greatest distress. Latterly he had been quartered in stations notoriously unhealthy; the last was Goruckpore, the miasmatic character of which is so well known as to have led surgeons to name the fever which is endemic there after the name of the place. Up to the time of my seeing him he had been in the habit of taking large doses of colchicum, though latterly with very imperfect relief. The appetite was very capricious; he suffered from flatulence and costiveness, and there was slight fulness over the right hypochondrium; the urine was of low specific gravity, indicating that no excessive quantity of either urea or lithic acid was held in solution. The small joints of the hand and feet had been attacked, as well as the elbows, wrists, and knees. He was greatly emaciated, pale, and cadaverous-looking. The fasciæ of the limbs were all swollen and tender,

the capsules of the joints and the sheaths of the tendons were full of fluid.

So severe and complicated a case of gout of the asthenic type I had rarely met with, not only on account of the system being deeply poisoned, both by the malady and the remedy, but also on account of the miasma existing in the constitution.

Under the eliminative treatment pursued, he slowly but gradually got better, and the functions of the different organs took on their normal action, so that at the end of ten weeks the general symptoms of the fit subsided. I then suggested the importance of change of air, and during the time he was away every effort, by means of tonics and a generous diet, together with the moderate use of wine and brandy-and-water, was strictly followed, in order to restore the general tone of his system. Subsequently, he obtained leave to go to England, but I advised him to protract the journey by staying in Italy and the south of France, so as not to arrive in England before June. Since his return to England his general health has greatly improved, nor has he had any return of the gout. After continuing to take small doses of quinine for some time, under my advice he took a course of iron, together with a generous diet. When I last saw him, he was looking in fair health,

and fully believed himself to be quite free from gout.

Case of Asthenic Gout occurring in a female suffering from anæmia.

A woman, about 50 years of age, in whom the change of life had occurred, applied to me while suffering from an attack of gout. She inherits gout from her father, and has had several attacks during the last eight years. The attack at first appeared to be slight, but a few days afterwards she began to feel severe pain in the left foot, and in the course of the night the great toe and dorsum of the left foot became much swollen, red, hot, and very painful. She informed me that about six months ago she had suffered a good deal from menorrhagia, and that her business, that of an "ironer," required her to remain standing for several hours daily in an over-heated and badly-ventilated room; and her business, she added, compelled her to take at times more stimulants than she otherwise would have done, which accounted for her general anæmic condition.

The treatment here employed was a draught of sulphate and carbonate of magnesia twice a day, together with a moderately stimulating diet. In

about a week the symptoms began to subside; I then added a pint of beer daily to her diet, subsequently ordered her quinine and iron, and in about six weeks from her first applying to me she was able to resume her business.



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Quips au cory

Vit. p. 16. In gout a redundancy of uric acid

Urine in chronic gout - uric acid - defic^t
urea — normal

If serum be exam^d

spec. gr. 1026.30 - alk & uric acid

§3 A highly azotized diet favors γ production
of lithic acid

Dr Todd divides

Gout into — γ sthenic form (plethora)
 γ asthenic — (anæmic)

Urates of uric in a crystalline form p. 27

Gout an organic compound - derived from a product
of unhealthy action of stomach & duodenum; wh^{ch}
gets into γ blood, unites there to some element wh^{ch}
it has been suffered to accumulate, thro'
defective secretion by liver.

- γ same causes wh^{ch} induce these two causes,
will give rise to a lithic acid diathesis

